

GenCore version 5.1.4.p5_4578
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OM protein - protein search, using SW model

Run on: March 17, 2003, 08:49:36 ; Search time 34 Seconds
(without alignments)
2985.817 Million cell updates/sec

Title: US-10-010-227-3
Perfect score: 4055
Sequence: 1 MGAESTPQTLVDKVLQAHV.....KAVEPTTNGEKKEPLEW 778

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 603988 seqs, 130485580 residues

Total number of hits satisfying chosen parameters: 603988

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%

Listing first 100 summaries

Database : Pending Patents_AA_New:*
1: /cgn2_6/ptodata/1/paa/PCIT_NEW_COMB.pep:*
2: /cgn2_6/ptodata/1/paa/US06_NEW_COMB.pep:*
3: /cgn2_6/ptodata/1/paa/US07_NEW_COMB.pep:*
4: /cgn2_6/ptodata/1/paa/US08_NEW_COMB.pep:*
5: /cgn2_6/ptodata/1/paa/US09_NEW_COMB.pep:*
6: /cgn2_6/ptodata/1/paa/US10_NEW_COMB.pep:*
7: /cgn2_6/ptodata/1/paa/US60_NEW_COMB.pep:*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	4055	100.0	778	1	PCT-US02-39286-12 Sequence 12, Appl
2	3397	83.8	840	6	US-10-369-493-3233 Sequence 3233, Ap
3	2456.5	60.6	779	6	US-10-369-493-21952 Sequence 21952, A
4	2068.5	51.0	875	6	US-10-369-493-7864 Sequence 7864, Ap
5	2055	50.7	695	6	US-10-369-493-9965 Sequence 9965, Ap
6	2027.5	50.0	710	6	US-10-369-493-15849 Sequence 15849, A
7	2025.5	50.0	753	6	US-10-282-122A-50294 Sequence 50294, A
8	2018.5	49.8	711	6	US-10-369-493-15479 Sequence 15479, A
9	1995	49.2	752	6	US-10-369-493-9413 Sequence 9413, Ap
10	1978	48.8	755	6	US-10-369-493-11883 Sequence 11883, A
11	1963.5	48.4	749	6	US-10-369-493-9308 Sequence 9308, Ap
12	1955.5	48.2	681	6	US-10-369-493-8616 Sequence 8616, Ap
13	1891	46.6	740	6	US-10-369-493-7437 Sequence 7437, Ap
14	1881	46.4	729	6	US-10-369-493-4678 Sequence 4678, Ap
15	1861	45.9	686	6	US-10-369-493-7055 Sequence 7055, Ap
16	1857	45.8	688	6	US-10-369-493-4299 Sequence 4299, Ap
17	1711.5	42.8	672	6	US-10-369-493-9059 Sequence 9059, Ap
18	1697.5	41.9	676	6	US-10-369-493-10463 Sequence 10463, A
19	1682.5	41.5	646	6	US-10-369-493-16643 Sequence 16643, A
20	1670.5	41.2	679	6	US-10-369-493-14041 Sequence 14041, A
21	1595.5	39.3	668	6	US-10-369-493-8819 Sequence 8819, Ap
22	1586	38.1	469	6	US-10-282-122A-15002 Sequence 15002, A
23	1560	38.5	477	6	US-10-282-122A-51178 Sequence 51178, A
24	1558.5	38.4	469	6	US-10-282-122A-65286 Sequence 65286, A
25	1545.5	38.1	469	6	US-10-282-122A-65917 Sequence 65917, A
26	1529.5	37.7	471	6	US-10-369-493-19706 Sequence 19706, A

27	1526	37.6	475	6	US-10-282-122A-69871 Sequence 69871, A
28	1520.5	37.5	472	6	US-10-282-122A-45090 Sequence 45090, A
29	1508	37.2	672	6	US-10-369-493-7323 Sequence 7323, Ap
30	1507.5	37.2	474	6	US-10-282-122A-43510 Sequence 43510, A
31	1507.5	37.2	480	6	US-10-369-493-28668 Sequence 28668, A
32	1505	37.1	459	6	US-10-282-122A-47840 Sequence 47840, A
33	1500	37.0	477	6	US-10-282-122A-67721 Sequence 67721, A
34	1494	36.8	670	6	US-10-369-493-4565 Sequence 4565, Ap
35	1483.5	36.6	466	6	US-10-282-122A-59513 Sequence 59513, A
36	1479.5	36.5	466	6	US-10-282-122A-56405 Sequence 56405, A
37	1477.5	36.4	466	6	US-10-282-122A-76008 Sequence 76008, A
38	1471	36.3	469	6	US-10-282-122A-58376 Sequence 58376, A
39	1458.5	36.0	465	6	US-10-282-122A-55825 Sequence 55825, A
40	1452	35.8	476	6	US-10-282-122A-77910 Sequence 77910, A
41	1449.5	35.7	472	6	US-10-282-122A-62917 Sequence 62917, A
42	1446.5	35.7	468	6	US-10-282-122A-67452 Sequence 67452, A
43	1441	35.5	476	6	US-10-282-122A-66247 Sequence 66247, A
44	1439.5	35.5	469	6	US-10-282-122A-68556 Sequence 68556, A
45	1436	35.4	507	6	US-10-282-122A-49077 Sequence 49077, A
46	1425.5	35.2	467	6	US-10-282-122A-77491 Sequence 77491, A
47	1406.5	34.7	477	6	US-10-282-122A-62917 Sequence 62917, A
48	1397.5	34.5	453	6	US-10-282-122A-73183 Sequence 73183, A
49	1391	34.3	484	6	US-10-282-122A-53727 Sequence 53727, A
50	1385	34.2	473	6	US-10-282-122A-64818 Sequence 64818, A
51	1381	34.1	473	6	US-10-282-122A-62546 Sequence 62546, A
52	1354	33.4	485	6	US-10-282-122A-63912 Sequence 63912, A
53	1311.5	32.3	470	6	US-10-282-122A-54676 Sequence 54676, A
54	1300	32.1	461	6	US-10-092-411A-13892 Sequence 13892, Ap
55	1298	32.0	456	6	US-10-282-122A-70845 Sequence 70845, A
56	1282	31.6	456	6	US-09-950-084-6093 Sequence 6093, Ap
57	1282	31.6	456	6	US-10-282-122A-43986 Sequence 43986, A
58	1279.5	31.6	466	6	US-10-282-122A-60508 Sequence 60508, A
59	1274.5	31.4	464	6	US-10-282-122A-45325 Sequence 45325, A
60	1243	30.7	464	6	US-10-282-122A-48943 Sequence 48943, A
61	1217.5	30.0	473	6	US-10-282-122A-75342 Sequence 75342, A
62	1211.5	29.9	462	6	US-10-282-122A-45317 Sequence 45317, A
63	1178.5	29.1	457	6	US-10-369-493-19849 Sequence 19849, A
64	1172.5	28.9	463	6	US-10-369-493-18971 Sequence 18971, A
65	1157.5	28.5	461	6	US-10-282-122A-72141 Sequence 72141, A
66	1132.5	27.9	460	6	US-10-369-493-18414 Sequence 18414, A
67	720.5	17.8	273	6	US-10-282-122A-71892 Sequence 71892, A
68	684.5	16.9	432	6	US-10-369-493-68 Sequence 68, Appl
69	641	15.8	431	6	US-10-369-493-625 Sequence 625, Appl
70	640.5	15.8	659	6	US-10-369-493-139 Sequence 139, Appl
71	637.5	15.7	423	6	US-10-369-493-21658 Sequence 21658, A
72	635	15.7	424	6	US-10-369-493-21467 Sequence 21467, A
73	613	15.1	419	6	US-10-369-493-1224 Sequence 1224, Ap
74	602.5	14.9	420	6	US-10-369-493-1032 Sequence 1032, Ap
75	595.5	14.7	417	6	US-10-369-493-2954 Sequence 2954, Ap
76	595.5	14.7	728	1	PCT-US02-40225-3277 Sequence 3277, Ap
77	595.5	14.7	728	6	US-10-320-797-3277 Sequence 3277, Ap
78	587.5	14.5	423	6	US-10-369-493-21351 Sequence 21351, A
79	576.5	14.2	422	6	US-10-282-122A-51844 Sequence 51844, A
80	575	14.2	421	6	US-10-369-493-9736 Sequence 9736, Ap
81	573.5	14.1	416	6	US-10-369-493-12142 Sequence 12142, A
82	566	14.0	418	6	US-10-369-493-12716 Sequence 12716, A
83	562	13.9	661	6	US-10-369-493-18713 Sequence 18713, A
84	561.5	13.8	709	6	US-10-369-493-4229 Sequence 4229, Ap
85	552	13.6	728	6	US-10-369-493-21525 Sequence 21525, Ap
86	552	13.6	721	6	US-10-369-493-3166 Sequence 3166, Ap
87	545	13.4	425	6	US-10-282-122A-5373 Sequence 5373, A
88	543	13.4	684	6	US-10-369-493-28808 Sequence 28808, A
89	541.5	13.4	418	6	US-10-369-493-2920 Sequence 2920, Ap
90	536.5	13.2	413	6	US-10-369-493-11053 Sequence 11053, A
91	475.5	11.7	780	6	US-10-369-493-375 Sequence 375, Appl
92	475	11.7	780	6	US-10-369-493-5788 Sequence 5788, Appl
93	463	11.4	905	6	US-10-369-493-2550 Sequence 2550, Ap
94	462	11.4	757	6	US-10-369-493-12761 Sequence 12761, A
95	449.5	11.1	727	6	US-10-369-493-10237 Sequence 10237, A
96	444.5	11.0	789	6	US-10-369-493-22130 Sequence 22130, A
97	440	10.9	816	6	US-10-369-493-3409 Sequence 3409, Ap
98	439.5	10.8	778	6	US-10-369-493-12251 Sequence 12251, A
99	435.5	10.7	852	5	US-09-724-676-76375 Sequence 76375, A

100 435.5 10.7 852 5 US-09-724-676-76376 Sequence 76376, A

ALIGNMENTS

RESULT 1

PCT-US02-39286-12

; Sequence 12, Application PC/TUS0239286

; GENERAL INFORMATION:

; APPLICANT: Lo, Sze Chung C

; APPLICANT: Montenegro-Chamorro, Maria V

; APPLICANT: Frank, Cheryl A

; APPLICANT: Deveau, Blaise A

; APPLICANT: Mahanty, Sanjoy K

; APPLICANT: Heiniger, Ryan W

; APPLICANT: Skalchunes, Amy R

; APPLICANT: Pan, Huaqin

; APPLICANT: Tarpey, Rex

; APPLICANT: Shuster, Jeffrey R

; APPLICANT: Tanzer, Matthew M

; APPLICANT: Hamer, Lisbeth

; APPLICANT: Adachi, Kiichi

; APPLICANT: DeZwaan, Todd M

; TITLE OF INVENTION: METHODS FOR THE IDENTIFICATION OF INHIBITORS OF

; TITLE OF INVENTION: ASPARAGINE SYNTHASE, 5-AMINOLEVULINATE SYNTHASE, HISTIDINOL-

; TITLE OF INVENTION: PHOSPHATASE, 3-ISOPROPYLMALATE AND THREONINE SYNTHASE AS

; TITLE OF INVENTION: ANTIBIOTICS

; FILE REFERENCE: 2079PCT

; CURRENT APPLICATION NUMBER: PCT/US02/39286

; CURRENT FILING DATE: 2002-12-06

; NUMBER OF SEQ ID NOS: 15

; SOFTWARE: PatentIn version 3.1

; SEQ ID NO 12

; LENGTH: 778

; TYPE: PRT

; ORGANISM: Magnaporthe grisea

PCT-US02-39286-12

Query Match 100.0%; Score 4055; DB 1; Length 778;

Best Local Similarity 100.0%; Pred. No. 0;

Matches 778; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MFGAESTPOTLYDKVLOAHVDEKLDGTLLYIDRHLVHVTSPQAFEGRLNAGRKVRPP 60

DB 1 MFGAESTPOTLYDKVLOAHVDEKLDGTLLYIDRHLVHVTSPQAFEGRLNAGRKVRPP 60

QY 61 DCTLATTDHNVPTTSRKALKDIASFIEDDSRTQCVTLNENKVEFGVTVYFGLSDKRGIV 120

DB 61 DCTLATTDHNVPTTSRKALKDIASFIEDDSRTQCVTLNENKVEFGVTVYFGLSDKRGIV 120

QY 121 HVIGPEQGTFLPGTTVVCGDSHTSTHGAFALAFGIGTSEVHVLATQCLITKRSKNMR 180

DB 121 HVIGPEQGTFLPGTTVVCGDSHTSTHGAFALAFGIGTSEVHVLATQCLITKRSKNMR 180

QY 181 QVDGELAPGVSSKDVVLHAIIGITGAGTGAVTEFCGVSIVRSLSMEARMSICNMSIEGGA 240

DB 181 QVDGELAPGVSSKDVVLHAIIGITGAGTGAVTEFCGVSIVRSLSMEARMSICNMSIEGGA 240

QY 241 RAGMVAPDEITFEYLKGRPLAPKYDSEPHKATQYWKNLQSDPGCAKYDIDVFIDAKDIVP 300

DB 241 RAGMVAPDEITFEYLKGRPLAPKYDSEPHKATQYWKNLQSDPGCAKYDIDVFIDAKDIVP 300

QY 301 TLTWGTSPEVDVPIITGVDPDPETFAEAKKADGRRLQYMGKAGTPMEDIPVDKVFIS 360

DB 301 TLTWGTSPEVDVPIITGVDPDPETFAEAKKADGRRLQYMGKAGTPMEDIPVDKVFIS 360

QY 361 CTNSRIEDLRAAAA VVKGRKAPNVKSA MVVPGSLVKTQABEGLDKIPFEAGFEWREA 420

DB 361 CTNSRIEDLRAAAA VVKGRKAPNVKSA MVVPGSLVKTQABEGLDKIPFEAGFEWREA 420

QY 421 GCSMCLGNPDLILAPOERCASNNRPFGRQAGGRTHLMSPVMAAAAGIVGKLADVRKL 480

DB 421 GCSMCLGNPDLILAPOERCASNNRPFGRQAGGRTHLMSPVMAAAAGIVGKLADVRKL 480

QY 481 TDYKASPHIAAYQKSTVTKPHVDERINQDAHEKDIADI PEDNNGPHNTNTSASVGTSGAGL 540

DB 481 TDYKASPHIAAYQKSTVTKPHVDERINQDAHEKDIADI PEDNNGPHNTNTSASVGTSGAGL 540

QY 541 PKFTILKGIAAPLEKANVDDTDAIIPKQFLKTIKRTGLGNALFYENRFNEDGTEKSDPVLN 600

DB 541 PKFTILKGIAAPLEKANVDDTDAIIPKQFLKTIKRTGLGNALFYENRFNEDGTEKSDPVLN 600

QY 601 KEPRKASILVCTGANFCGSSREHAPWALNDFGIRSVIAPSFADIFFNNSFKNGMLPIP 660

DB 601 KEPRKASILVCTGANFCGSSREHAPWALNDFGIRSVIAPSFADIFFNNSFKNGMLPIP 660

QY 661 IKDQAQIEAIAAEARAGKEIEVDLPNQLIKNATGETICTFEVEEPRKHCLVNGLDDIGLT 720

DB 661 IKDQAQIEAIAAEARAGKEIEVDLPNQLIKNATGETICTFEVEEPRKHCLVNGLDDIGLT 720

QY 721 MQMEDKIAEPEAKMTRETPWLDGTGYLKRKGQGGKLAAKAVPVTNNRGEKEKEPLEW 778

DB 721 MQMEDKIAEPEAKMTRETPWLDGTGYLKRKGQGGKLAAKAVPVTNNRGEKEKEPLEW 778

RESULT 2

US-10-369-493-3233

; Sequence 3233, Application US/10369493

; GENERAL INFORMATION:

; APPLICANT: Cao, Yongwei

; APPLICANT: Hinkle, Gregory J.

; APPLICANT: Slater, Steven C.

; APPLICANT: Goldman, Barry S.

; APPLICANT: Chen, Xianfeng

; TITLE OF INVENTION: EXPRESSION OF MICROBIAL PROTEINS IN PLANTS FOR PRODUCTION OF

; TITLE OF INVENTION: PLANTS WITH IMPROVED PROPERTIES

; FILE REFERENCE: 38-10(52052)B

; CURRENT APPLICATION NUMBER: US/10/369,493

; CURRENT FILING DATE: 2003-02-28

; PRIOR FILING DATE: 2003-02-28

; PRIOR FILING DATE: 2002-02-21

; NUMBER OF SEQ ID NOS: 47374

; SEQ ID NO 3233

; LENGTH: 840

; TYPE: PRT

; ORGANISM: Neurospora crassa

; FEATURE:

; NAME/KEY: unsure

; LOCATION: (1)..(840)

; OTHER INFORMATION: unsure at all Xaa locations

US-10-369-493-3233

Query Match 83.8%; Score 3397; DB 6; Length 840;

Best Local Similarity 77.8%; Pred. No. 1.2e-278;

Matches 655; Conservative 53; Mismatches 60; Indels 74; Gaps 5;

QY 9 QTLVDKVLQAHVDEKLDGTLLYIDRHLVHVTSP----- 44

DB 1 RTLYDKVFOAHVDEKLDGTLLYIDRHLVHVTSPVRSLNPHAGELRFRSPVPSTDPXS 60

QY 45 -QAFEGRLNAGRKVRPPDCTLATTDH----- 69

DB 61 IQAFEGLENAGRQVRPDCTLATTDHVSMSLSLPFFPHMAHAARSPXYLAPQSOLCG 120

QY 70 -----NVPTTSRKALKDIASFIEDDSRTQCVTLNENKVEFGVTVYFGLSDKRGIGI 119

DB 121 TASXPTRCRMVPTTSRKALKDIASFIEDDSRTQCVTLNENKVEFGVTVYFGLSDKRGIGI 180

QY 120 VHVIGPQGTFLPGTTVVCGDSHTSTHGAFALAFGIGTSEVHVLATQCLITKRSKNMR 179

DB 181 VHVIGPQGTFLPGTTVVCGDSHTSTHGAFALAFGIGTSEVHVLATQCLITKRSKNMR 240

QY 180 IQVDGELAPGVSSKDVVLHAIIGITGAGTGAVTEFCGVSIVRSLSMEARMSICNMSIEG 239

DB 241 QVDGELAPGVSSKDVVLHAIIGITGAGTGAVTEFCGVSIVRSLSMEARMSICNMSIEAG 300

Qy	240	ARAGVAVPEBITFEYLYKGRPLAKYDPSPEMHKATQYWKUWLOSDDGAKYDIDVFDACKIV	299
Qy	300	PLTJMGTSDEDDVPIGVVDPDEFATFEAKKADRRMLQVYGLAAGTGMEDIPVDKVIIG	359
Db	361	PVYMGTSDEDDVPIGVVDPDEFATFEAKKADRRMLQVYGLAAGTGMEDIPVDKVIIG	420
Qy	360	SCTNSRIEDLRAAAAYVVKGRKKA.PNVKSAMVVPSSGLVYKTOAEBEGLDKIFEBAQFEMRE	419
Db	421	SCTNSRIEDLRAAAAYVVKGRKKA.IKRALIVPSSGLVKDQABAEGLDKIFQEAQFEMRE	480
Qy	420	AGCSMCLGNPDLIAQOERCASSTNRFEBGROGAGGRTILMS.PWMAAAAGIVGLADYRK	479
Db	481	AGCSMCLGNPDLISPERCASTSNRFEBROGAGGRTILMS.PWMAAAAGIVGLADYRK	540
Qy	480	LTDYKASPHIAAY---OKSTVTKPHVDERINODAEHDIIADIPEDNNGPHNTSASVGT	536
Db	541	LTDYKSSPHEAAVIVETTSTAKAHTDERIEEDVEKDKLADQODSS-POVNTSVS-KS	598
Qy	537	SAGLPKFTLLKGIAALEKANVDTDAIIPKQFLTKIRTKLGNALFYEMRENEDEGTEKSD	596
Db	599	SAGLPKFTNLKGIAALEMKANIDTDALIPKQFLTKIRTKLGNALFYEMRYNPDGSENP	658
Qy	597	PVLNNEPKYKASLIVCTGANFGCGSSREHAPMALNDGIRKVIAPSPADIPFNNSFKXGM	656
Db	659	PVLNNEPKYKASLIVCTGANFGCGSSREHAPMALNDGIRKVIAPSPADIPFNNSFKXGM	718
Qy	657	LPPIIDQOIEAIAEBARAKEIEVDLPNOLIGNAFGETICTFEVEEERKHCVLNGJLDD	716
Db	719	LPPIAKDQAALEVAHBAHAGREIEIDLPNOLIKDADGNTLCBEVEEERKHCVLNGJLDD	778
Qy	717	IGLTQWMEBKIAEFAKMTRETPMLDGTGYLKRKGOGKLAKAVPVBTNRGEEKPEPL	776
Db	779	IGLTQWMEBKIAEYAKMSQOTPLDGRATYLKRGOGSKLAKAAVPVBTNRGEEKPEPL	838
Qy	777	EW 778	
Db	839	EW 840	

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RESULT 3
US-10-369-493-21952
; Sequence 21952, Application US/10369493
; GENERAL INFORMATION:
; APPLICANT: Cao, Yongwei
; APPLICANT: Hinkle, Gregory J.
; APPLICANT: Slater, Steven C.
; APPLICANT: Goldman, Barry S.
; APPLICANT: Chen, Xianfeng
; TITLE OF INVENTION: EXPRESSION OF MICROBIAL PROTEINS IN PLANTS FOR PRODUCTION OF
; TITLE OF INVENTION: PLANTS WITH IMPROVED PROPERTIES
; FILE REFERENCE: 38-10(52052)B
; CURRENT APPLICATION NUMBER: US/10/369,493
; CURRENT FILING DATE: 2003-02-28
; PRIOR APPLICATION NUMBER: US 60/360,039
; PRIOR FILING DATE: 2002-02-21
; NUMBER OF SEQ ID NOS: 47374
; SEQ ID NO 21952
; LENGTH: 779
; TYPE: PRT
; ORGANISM: Saccharomyces cerevisiae
US-10-369-493-21952

```

Query Match	60.6%;	Score 2456.5;	DB 6;	Length 779;
Best Local Similarity	63.1%;	Pred. No. 5.4e-199;		
Matches 486;	Conservative 93;	Mismatches 152;	Indels 39;	Gaps 10;

QY 8 PQLLYPKVLGAHVVDKLDGTLLVYIDRLVHEVTSPQAEEGRNAGRKYRPPDCLATT 67
| : ||||| | : : ||||| ||||| ||||| ||||| |||||
Db 9 PRTLYKVFDAHVHODENGSLFLYIDRLVHEVTSPQAEEGRNAGRKYRVPDCLATV 68

```

QY 68 DHNVETSRKLLKDIASFLKEDDSRFQCVTLLENVKEPEFGTYGSLGSKRQGIYHIVGEO 127
Db 69 DHNVETSRKFKNSLDTFKQTDSTRLOVKTLNENVKQFGVPYFGMSDARQGIYHTIGPEB 128
QY 128 GFTLEGTIVWCDSHSTSTGAFGALAFGICTSEVEHVLAFOCLITKRSKNMRLOVDSELA 187
Db 129 GFTLPCTIVWCDSHSTSTGAFGSLAFGICTSEVEHVLAFOCLITKRSKNMRIVNGLS 188
QY 188 PGVSSKDVVLAHGIITGATGGAVIDEFCGSVIRSLSMERMSICNWSIGGAFAGVAP 247
Db 189 PGITSKDLILYIGLIGTAGTGCVIEFAGEALEALSMERMSICNMAIEAGARAGMIKP 248
QY 248 DEITFEYLKGRFLAKYDSEPEWHKATQYWKNLQSDGAKXDIVDFDAKQIVPFLTNGTS 307
Db 249 DETTFQYTKGRFLAKR--GAEMEKAVALYWKTLKTDEGAKFDHEINIEADVIVPITWTGTS 306
QY 308 PEDVVPITGVVDPEIFATEAKKADGRMLQYVGLKAGTMEBIPVDKVFISGCTNSRIE 367
Db 307 PODALPIITGSVDPDPKNVDPRIKSGMERALATWGLEPNTPDKSITKVDKVFISGCTNGRIE 366
QY 368 DLRAAAVAVVGRKKAPNVKSAVWVPGSGLVKTQAEEBGLDKIFEENAGFEWRACCSNCLG 427
Db 367 DLRSAAVAVVGRQKLASNITKLAMVWPGSGLVKQAEABGLDKIFEENAGFEWRACCSICLG 426
QY 428 MNPDLIAPOERCASTNSRNFPEGRQAGSGRTHLMSPTMAAAGIVGLKADVRKLTIDYK--- 484
Db 427 MNPDLIDAYERCASTNSRNFPEGRQGLSRTHLMSPTMAAAGIAGHVDIRF-EYKQD 485
QY 485 -ASPHI-----AAYQKSTVTKPHVDERINODAEHKQIADIPEDNNGPHTNTS 531
Db 486 QSSPVEYVTSEBEKLESAAVYDHAEPVQ---EDAQDIT-ANDELKQIPVKSDDTPPAKPS 541
QY 532 ASVGTSGAGLPKFTIILKGIAPLEKAVNDTDAIIPKQFLTKIKRTGLGNALFYEMRFNEDG 591
Db 542 -----SSGKKPFLTEGIIAGIAPLDKANVDDTAIIPKQFLTKIKRTGLKKGIFYEMRFRKD 596
QY 592 ---TEKSDPVLNKEPPRKASILVCTGANFGCGSSREHAPALNDFGIRSVIABSFADIFF 648
Db 597 QGKODETTFVLVWEWEAREAEIILVVTGDNFGCGSSREHAPALNDFGIRSVIABSYGDIIFY 656
QY 649 NNSFNGMFLPIIKQAOEIALAABRAGKEIEVDLPNOLIKNATGETIIC-FEVEBERK 707
Db 657 NNSFNGMLPIPLDQOIIIDKLIPIANKGKLCVDPNOKILDSGVALVDHFEIEPERK 716
QY 708 HCLVNLGLDIDIGLTMQMEDKIAEFEAQKTRRETPWLDGTGY-----KRR 750
Db 717 HCLVNLGLDIDIGITLQKEEYISRYEALRREKYSFLBEGSKLLKPDNVKRR 766

RESULT 4
US-10-369-493-7864
; Sequence 7864, Application US/10369493
; GENERAL INFORMATION:
; APPLICANT: Cao, Yongwei
; APPLICANT: Hinkle, Gregory J.
; APPLICANT: Slater, Steven C.
; APPLICANT: Goldman, Barry S.
; APPLICANT: Chen, Xianfeng
; TITLE OF INVENTION: EXPRESSION OF MICROBIAL PROTEINS IN PLANTS FOR PRODUCTION OF
; FILE REFERENCE: 38-10(52052)B
; CURRENT APPLICATION NUMBER: US/10/369,493
; PRIOR FILING DATE: 2003-02-28
; PRIOR APPLICATION NUMBER: US 60/360,039
; PRIOR FILING DATE: 2002-02-21
; NUMBER OF SEQ ID NOS: 47374
; SEQ ID NO 7864
; LENGTH: 875
; TYPE: prt
; ORGANISM: Rhodobacter sphaeroides
; FEATURES:
; NAME/KEY: unsure
; LOCATION: (1)..(875)

```

Db 717 HCLVNGLDLIGLTLQKEEYISRYEALRREKYSFLEGGSKLLKFDNVPRK 766

RESULT 4
US-10-369-493-7864
Sequence 7864, Application US/10369493

1 APPLICANT: Cao, Yongwei
 2 APPLICANT: Hinkle, Gregory J.
 3 APPLICANT: Slater, Steven C.
 4 APPLICANT: Goldman, Barry S.
 5 APPLICANT: Chen, Xiangle
 6 TITLE OF INVENTION: EXPRESSION OF MICROBIAL PROTEINS IN PLANTS FOR PRODUCTION OF
 7 TITLE OF INVENTION: PLANTS WITH IMPROVED PROPERTIES
 8 FILE REFERENCE: 38-10(52052)B
 9 CURRENT APPLICATION NUMBER: US/10/369,493
 10 CURRENT FILING DATE: 2003-02-28
 11 PRIOR APPLICATION NUMBER: US 60/360,039
 12 PRIOR FILING DATE: 2002-02-21

```

; NUMBER OF SEQ ID NOS: 47374
;
; SEQ ID NO 7864
;
; LENGTH: 875

```

```

; ORGANISM: Rhodobacter sphaeroides
;
; FEATURE:
; NAME/KEY: unsure
; LOCATION: (1)..(875)
;

```


; NAME/KEY: MISC FEATURE
; LOCATION: (540)..(540)
; OTHER INFORMATION: X=any amino acid
US-10-282-122A-50294

```
Query Match          50.0%; Score 2025.5; DB 6; Length 753;
Best Local Similarity 54.0%; Pred. No. 1.7e-162;
Matches 422; Conservative 94; Mismatches 189; Indels 77; Gaps 13;

Qy  9 QTLVDKVLQAVVDEKLDGTLLYIDRHLVHEVTSPOAFEGRLNAGRVRPDCDTLATTD 68
Db  1 QTLVDKLVNHHVHTEDEGDTALLIYDQLLHEVTSPOAFEGRLKLAQRVPVWISANLAVSD 60

Qy  69 HNVPTTSRKALKDIASTFKEDDSRTQCVTLLENVKEFGVTFGLSDKEQGIHVHVGIPBQG 128
Db  61 HNVPTTDR-----SHGIADPVSKLQVDTLDCANDAYGITQFKMNDVRQGIHVHIGPBQG 114

Qy  129 FTLPGTIVVCGDSHTSHGAFGALAFGIGTSEVEHVLAQCCLITKRSKNMRIQVDCGELAP 188
Db  115 ATLPGMTIVCGDSHTSHGAFGALAHGIGTSEVEHVLAQTOTLLOKSKNMLVKVEGQLPR 174

Qy  189 GVSSKDVVLHAIGIITAGGTGAVIEFCGVSIRLSMEARMSICNMSIEGGARAGMVAPD 248
Db  175 GCTAKDVLIAIIGIITAGGTGVAIEFGGSTIRALTWEGRTVNCNMAIEAGARAGMVAVD 234

Qy  249 EITFEYLKGRPLAPKYDSPWHKATQYWKNLQSDPGAKYDIDVFDIAKDVIPTLTWTGTS 308
Db  235 DTTVEYLKGRPFVFP--TGAEWDAQVEYWKTFRSDGGAQFQDRVVELDAAQIVPQVTWTGTS 292

Qy  309 EDVVPIITGVVDPDETFAATEAKKADGRMLQYMGKAGTPMEDIPVDKVFIGSCTNSRIED 368
Db  293 EMVTSIDGRVDPDEREKDPVKRDAMEALAYMALAPNTPIBAIKVDKIFIGSCTNAIED 352

Qy  369 LRAAAAVVK--GRKKAPNVKSAMVVPGLVKTOAEIEGLDKIPFEAGFEWREAGCSMCL 426
Db  353 IRAAAVVKLNRRVAPNVPLAMVVPGLVKVKAQAEIEGLDKVTEAGFEWREAGCSMCL 412

Qy  427 GMPNDILAPOERCASSTNRNFEGRQAGGRTHLMSPVMAAAAGIVGKLADVRKL----- 480
Db  413 ANNADRLPEGRCASTSNRNFEGRQGGRTHLVSPMAAAAAIEGHFVDIRRLGXATH 472

Qy  481 -----TDYKASHIAAYQKSTVTKPHVDERINQDAHEKDIIADIPEDNN 524
Db  473 RFGASPPRSRWRAACSAWPAATRSAPAWARTSTPPRDQAR-----G 514

Qy  525 GHPTNTSASVGTG-----AGL-----PKFTILKGIAAPLEKANVDTDAIIPKQFLKT 571
Db  515 GLTARASAPIRASILPARAAGLQSGXRIMEKFNVTGTGVAPLDRENVDTAIIPKQFLKS 574

Qy  572 IKRTGLGNALFYEMRF---NEDGTEKS-----DFVLNKSPYRKASILVCTGANFGCGSS 622
Db  575 IKRTGFGPNAFDWRVLDHGEQGDNSKRPLNDFVLNQPRYQAGSVLLAR-KNFGCGSS 633

Qy  623 REHAPNALDFGRSVIAPSFADIFNNSPKNGMLPIPIKDOAQIEAIAAEARA--GKEI 680
Db  634 REHAPALQOYGRFALVAPSFADIFNNCYKNGLLPIVLTEQ-QVDHLFNDTYAFNGYQL 692

Qy  681 EVDLPNQLKNATGETICTPEVEFEFRKHLVNGLDDITGLTWQMEDKIAEFAEAKMTRETPW 740
Db  693 TIDLDQAVVRAPDGREY-PEITAFKRYCLLNGFDLGLTLRHADKIRQFEAEERLAKQPW 751

Qy  741 LD 742
Db  752 LD 753
```

RESULT 8

US-10-369-493-15479
; Sequence 15479, Application US/10369493
; GENERAL INFORMATION:
; APPLICANT: Cao, Yongwei
; APPLICANT: Hinkle, Gregory J.
; APPLICANT: Slater, Steven C.

; APPLICANT: Goldman, Barry S.
; APPLICANT: Chen, Xianfeng
; TITLE OF INVENTION: EXPRESSION OF MICROBIAL PROTEINS IN PLANTS FOR PRODUCTION OF
; TITLE OF INVENTION: PLANTS WITH IMPROVED PROPERTIES
; FILE REFERENCE: 38-10(52052)B
; CURRENT APPLICATION NUMBER: US/10/369,493
; CURRENT FILING DATE: 2003-02-28
; PRIOR APPLICATION NUMBER: US 60/360,039
; PRIOR FILING DATE: 2002-02-21
; NUMBER OF SEQ ID NOS: 47374
; SEQ ID NO 15479
; LENGTH: 711
; TYPE: PRT
; ORGANISM: Xanthomonas campestris
; FEATURE:
; NAME/KEY: unsure
; LOCATION: (1)..(711)
; OTHER INFORMATION: unsure at all Xaa locations
US-10-369-493-15479

```
Query Match          49.8%; Score 2018.5; DB 6; Length 711;
Best Local Similarity 56.1%; Pred. No. 6.1e-162;
Matches 419; Conservative 87; Mismatches 192; Indels 49; Gaps 10;

Qy  9 QTLVDKVLQAVVDEKLDGTLLYIDRHLVHEVTSPOAFEGRLNAGRVRPDCDTLATTD 68
Db  2 KTLVDKLVMEHEVTRDRDGGSSLIYIDRHLHEVTSPOAFEGRLAGKRPWRIDANIATPD 61

Qy  69 HNVPTTSRKALKDIASTFKEDDSRTQCVTLLENVKEFGVTFGLSDKROGIVHVGIPBQG 128
Db  62 HNVPTTRAEROGGLES--ISDEVSRLOVQVDTLDCNDODFGILEFKMNDTROGIVHVGIPBQG 120

Qy  129 FTLPGTIVVCGDSHTSHGAFGALAFGIGTSEVEHVLAQCCLITKRSKNMRIQVDCGELAP 188
Db  121 ATLPGMTIVVCGDSHTSHGAFGALAHGIGTSEVEHVLAQCCLIAKKNKMQVRVEGTLPF 180

Qy  189 GVSSKDVVLHAIGIITAGGTGAVIEFCGVSIRLSMEARMSICNMSIEGGARAGMVAPD 248
Db  181 GVTAKDVLVAVIGKIGTAGGNHGALEFAGSIRALSMEGRMTICNMSIEAGARVGMVAVD 240

Qy  249 EITFEYLKGRPLAPKYDSPWHKATQYWKNLQSDPGAKYDIDVFDIAKDVIPTLTWTGTS 308
Db  241 EKTIAVYKGRFPAPK--GADWDAVALMRTLVSDDADASFDTVVELRAEDIKPQVSWGTSP 298

Qy  309 EDVVPIITGVVDPDETFAATEAKKADGRMLQYMGKAGTPMEDIPVDKVFIGSCTNSRIED 368
Db  299 EMVVAIDQVDPDPAEQPTKEDSIQRALKYMGRLRANQPIEIHLDRVFIGSCTNSRIED 358

Qy  369 LRAAAAVVKGRKKAPNVKSAMVVPGLVKTOAEIEGLDKIPFEAGFEWREAGCSMCLGM 428
Db  359 LRAAAAVAKGRKVASTIKQALVVPGLVKVKAQAEIEGLDKIFLDAGFEWREPGCSMCLAM 418

Qy  429 NPDILAPOERCASSTNRNFEGRQAGGRTHLMSPVMAAAAGIVGKLADVRKLTDYKASPH 488
Db  419 NPDKLGSGEHCASSTNRNFEGRQAGGRTHLVSPMAAAAAVSGHFVDVRELOGIETREX 478

Qy  489 IAAQKSTVTVPKHVDERINQDAHEKDIIADIPEDNNGPHTNTSASVGTSA-GLPKFTILK 547
Db  479 GIATSRU-----HPATPFSTPNRSYMTPTQHT 507

Qy  548 GIAAPLEKANVDTDAIIPKQFLKTIKRTGLGNALFYEMRF---NEDGTEKS-----DFV 598
Db  508 GLVAPLDRANVDTDOIIPKQFLKSIKRTGFGPNLFDWRYLIDIGEPGRDNSTRPLNQEFV 567

Qy  599 LNKEPYRKASILVCTGANFGCGSSREHAPNALNDGIBSVIAPSFADIFNNSPKNGMLP 658
Db  568 LNFPRYQAGSVLLAR-ENFGCGSSREHAPNALDEYGFRAVIAPSFADIFNNSPKNGMLP 626

Qy  659 IPKDOAQIEAIAAE--ARAGKEIVDLNQLIKNATGETICTPEVEFEFRKHLVNGLDD 716
Db  627 I-VLAAEAMDALFEQCLNGEGYQLTVDLAAQVRPDPGVEY-AFEIDAFRKHLVNGLDD 694

Qy  717 IGLTWQMEDKIAEFAEAKMTRETPWLDG 743
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Db 685 IGLTLQADALIGREFGQHRAGQPMWLF 711
|||||
RESULT 9
US-10-369-493-9413
; Sequence 9413, Application US/10369493
; GENERAL INFORMATION:
; APPLICANT: Cao, Yongwei
; APPLICANT: Hinkle, Gregory J.
; APPLICANT: Slater, Steven C.
; APPLICANT: Goldman, Barry S.
; APPLICANT: Chen, Xianfeng
; TITLE OF INVENTION: EXPRESSION OF MICROBIAL PROTEINS IN PLANTS FOR PRODUCTION OF
; FILE REFERENCE: 38-10(52052)B
; CURRENT APPLICATION NUMBER: US/10/369,493
; CURRENT FILING DATE: 2003-02-28
; PRIOR APPLICATION NUMBER: US 60/360,039
; PRIOR FILING DATE: 2002-02-21
; NUMBER OF SEQ ID NOS: 47374
; SEQ ID NO 9413
; LENGTH: 752
; TYPE: PRT
; ORGANISM: Xylella fastidiosa
; FEATURE:
; NAME/KEY: unsure
; LOCATION: (1)..(752)
; OTHER INFORMATION: unsure at all Xaa locations
US-10-369-493-9413

Query Match 49.2%; Score 1995; DB 6; Length 752;
Best Local Similarity 54.8%; Pred. No. 6.6e-160;
Matches 418; Conservative 96; Mismatches 207; Indels 42; Gaps 13;

Qy 9 QTLVYKVLQAAVNVDEKLDGTVLTYIDRLVHEVTSPOAFEGIRNAGRKVRPDCLTATD 68
:|||||
Db 2 KTLVGKMDIHVARRDGSLLIYIDRLHVEVTSPOAFEGIRLGRPLMRVANAIATPD 61
|||||
Qy 69 HNVPTTSKALKDIASFKEDDSRTOCVTLEENVKEFGVTYFGSLSDKROGIVHVIGPEG 128
|||||
Db 62 HNVPTTKAERQGSLLS-IADIVSRLOVOTLDENCDPFGIFERKMDVAGQIVHVIGPEG 120
|||||
Qy 129 FTLPGETTVVCGDSHTSTHGAFGALAFGIGTSEVHVLAOTCLITRSKNMRIOVDGEIAP 188
|||||
Db 121 ATLEGMTVVCDSHTSTHGAFGALAHGIGTSEVHVLAOTCLITRSKNMRIOVDGEIAP 180
|||||
Qy 189 GVSSKDVVLHAIIGITGAGGAVIEFGSVTRSLSMERNSICNMSIEGARAGMVA 248
|||||
Db 181 GVTAKDIALALIGKIGTAGGNGVAVIEFGSVTRSLSMERNSICNMAIEGARAGMVA 240
|||||
Qy 249 EITFEYLVKGRPLAPKYDSEPMHKAQYWKNLQSDPAKYDIDVFIDADIVTLTWGTS 308
|||||
Db 241 EKTQYVHGRPLAPKY--GSDMDAAVAFMKGIVSDPDPAHDRVVELSAEIKQVWTGTS 298
|||||
Qy 309 EDVVPITGVDPDETFATBAKKAAGRMQLQYWGKLAGTPEMDIPIVDKVFISGCTSRIED 368
|||||
Db 299 EMVSAVDSQSVDPDEKETPVKKESLIRALKVWGLQPNPITSIKIDRVFISGCTSRIED 358
|||||
Qy 369 LRAAAVYVGRKKADPNVKSAMVPPSGGLVKTQAEDEGLDKITFEAGFEWREBEGCSMCLM 428
|||||
Db 359 LRAAAEVVGRKVAFTVQAMVPPSGGLVKAQAEVGLDKITFEAGFEWREBEGCSMCLM 418
|||||
Qy 429 NPDLIAPORCASTNNRNFEEGQAGRTILMSPVMAAAGIVGLADIVRKLTDVKASPH 488
|||||
Db 419 NPDLKSGSGHCHSTNNRNFEEGQAGRTILMSPVMAAAGIVGLADIVRKLTDVKASPH 476
|||||
Qy 489 I-----AAVOKSTVTPHYD---ERINODAHKDIADIPEDNNGPHTNTSASVGTSA 538
|||||
Db 477 VVFDVAMVKRANEGIYSPDFDCFTSSAXSVSKRLPFSIP-----AAXXNGSALYDRSA 532
|||||
Qy 539 G-----LPKFTILGIAAPLEKANVDTDAITPKQFLKTIKXTGLGNALFYEMRF-- 587
|||||
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```
Db 533 HRIKHKMSLMKPFQTHGLVCPIDRVNVVDTDQIIPKQFLKSIRKTRGGRPLFDEMRYL 592
|||||
Qy 588 ----NEDGTEK---SDFVLNKEPYRKASILVCTGANFGCGSSREHAPMALNDFGIRVIA 640
:|||||
Db 593 AGQPGQDSKRPINSDFVLNPRYRGASVLLARD-NFGCGSSREHAAWALDEYGRFVIA 651
|||||
Qy 641 PSFADIFPNNSFRKGMPLPIPKDAQIEAIAEARA--GKIEVDLPNQLIKNATGELIC 698
|||||
Db 652 PSFADIFPNNSFRKGLLPL-VLNKREVDALFAQCQVGEYTLTYDLAAQVITPDGTTY- 709
|||||
Qy 699 TFEVEEPRKHCLVNGLDIDGLTMQWEDIKAEFEAKMTRETPML 741
|||||
Db 710 AFQIDTPKHCLVNGLDIDGLTYQAEIRAFEAHRIROQWL 752
|||||

RESULT 10
US-10-369-493-17883
; Sequence 17883, Application US/10369493
; GENERAL INFORMATION:
; APPLICANT: Cao, Yongwei
; APPLICANT: Hinkle, Gregory J.
; APPLICANT: Slater, Steven C.
; APPLICANT: Goldman, Barry S.
; APPLICANT: Chen, Xianfeng
; TITLE OF INVENTION: EXPRESSION OF MICROBIAL PROTEINS IN PLANTS FOR PRODUCTION OF
; FILE REFERENCE: 38-10(52052)B
; CURRENT APPLICATION NUMBER: US/10/369,493
; CURRENT FILING DATE: 2003-02-28
; PRIOR APPLICATION NUMBER: US 60/360,039
; PRIOR FILING DATE: 2002-02-21
; NUMBER OF SEQ ID NOS: 47374
; SEQ ID NO 17883
; LENGTH: 755
; TYPE: PRT
; ORGANISM: SPHINGOMONAS
; FEATURE:
; NAME/KEY: unsure
; LOCATION: (1)..(755)
; OTHER INFORMATION: unsure at all Xaa locations
US-10-369-493-17883

Query Match 48.8%; Score 1978; DB 6; Length 755;
Best Local Similarity 54.3%; Pred. No. 1.8e-158;
Matches 417; Conservative 86; Mismatches 217; Indels 48; Gaps 12;

Qy 9 QTLVYKVLQAAVNVDEKLDGTVLTYIDRLVHEVTSPOAFEGIRNAGRKVRPDCLTATD 68
:|||||
Db 1 RTLYEKLWADHVERRDGTCLTYIDRLHVEVTSPOAFGLRAADRVKRRPDLTLAVPD 60
|||||
Qy 69 HNVPTTSKALKDIASFKEDDSRTOCVTLEENVKEFGVTYFGSLSDKROGIVHVIGPEG 128
|||||
Db 61 HNVPTTPRVDAAGNALPLADASASAGQLSALRGNVAFEGVPIYDADADAGQIVHVIGPEG 120
|||||
Qy 129 FTLPGETTVVCGDSHTSTHGAFGALAFGIGTSEVHVLAOTCLITRSKNMRIOVDGEIAP 188
|||||
Db 121 FTLPGETTVVCGDSHTSAGAFGALAFGIGTSEVHVLAOTCLITRSKNMRIOVDGEIAP 180
|||||
Qy 189 GVSSKDVVLHAIIGITGAGGAVIEFGSVTRSLSMERNSICNMSIEGARAGMVA 248
|||||
Db 181 GVSADVVVLAIIGKIGTAGGNGVAVIEFGSVTRSLSMERNSICNMSIEGARAGMVA 240
|||||
Qy 249 EITFEYLVKGRPLAPKYDSEPMHKAQYWKNLQSDPAKYDIDVFIDADIVTLTWGTS 308
|||||
Db 241 EKTFAVYKGRPLAPKGEA--MDRAVAVYKTLPTDHAAYYDKVTLTDAADIASLWTGTS 298
|||||
Qy 309 EDVVPITGVDPDETFATBAKKAAGRMQLQYWGKLAGTPEMDIPIVDKVFISGCTSRIED 368
|||||
Db 299 EDVVPITGVDPDPSFDDPSKRAAQRSLDYWGLPTGTAMODIPIVEHIFISGCTSRIED 358
|||||
Qy 369 LRAAAVYVGRKKADPNVKSAMVPPSGGLVKTQAEDEGLDKITFEAGFEWREBEGCSMCLM 428
|||||
Db 359 LRAAAEVVGRKVAFTVQAMVPPSGGLVKTQAEDEGLDKITFEAGFEWREBEGCSMCLM 418
|||||
```

QY 429 NPDILAPQRCSTSNRNFEGROGAGRTHLMSPVMAAAAGIVCKLADVRKL----- 480
Db 419 NPDKVPAGRCSTSNRNFEGROGAGRTHLSPVMAAAAVTGHLLTDVRLMADQAXXX 478
QY 481 ---TDVKASPHIAAYOKSTVTKPHVDERI-----NDAHEKDIADIPE 521
Db 479 RGETPXKRRSSHXLPRSKAVSPR-PMRVPIRGRRRRSRSPSSSHRADAGGLPE 537
QY 522 --DNNGPHTNTSASV-----GTSAGLPKFTILKGAAPLEKANVDTDAIIPKQFLKTIK 573
Db 538 IGDGRPFVRKAVSMYLVNTVSAERRXWSRFRARAYPWGAKNIDTDIIIPAHWLKTTT 597
QY 574 RTGLGNALFYEMRFNEDGTEKSFVNLKEPYRKASILVCTGANFGCGSSREHAPWALNDF 633
Db 598 REGLGKGAPEFVR-ABFGN-----LFDPPRYAGAPILV-AGENFGCGSSREHAAWALADM 650
QY 634 GRSVIAPSFADIFFNNSFKNGMLPIPKDOAQIEAIAEABARAKETEVDLPNOLIKNAT 693
Db 651 GIQAVIAPSFSDIFSGNAFKNGIVTVVLPOEA-IDRLVQVATA-NEITVDLETMTVTTFD 708
QY 694 GETICTFEVEERKHKLVNGLDDIGLTMQMEDKIAEPEAKWTRETPTWL 741
Db 709 QDRF-AFELDPFRDCLMQGLDEIGMTLAQDTAISKEFSAVAHERPWI 755
RESULT 11
US-10-369-493-9308
; Sequence 9308, Application US/10369493
; GENERAL INFORMATION:
; APPLICANT: Cao, Yongwei
; APPLICANT: Hinkle, Gregory J.
; APPLICANT: Slater, Steven C.
; APPLICANT: Goldman, Barry S.
; APPLICANT: Chen, Xianfeng
; TITLE OF INVENTION: EXPRESSION OF MICROBIAL PROTEINS IN PLANTS FOR PRODUCTION OF
; FILE REFERENCE: 38-10(52052)B
; CURRENT APPLICATION NUMBER: US/10/369,493
; PRIOR FILING DATE: 2003-02-28
; PRIOR APPLICATION NUMBER: US 60/360,039
; PRIOR FILING DATE: 2002-02-21
; NUMBER OF SEQ ID NOS: 47374
; SEQ ID NO 9308
; LENGTH: 749
; TYPE: PRT
; ORGANISM: Xylella fastidiosa
; FEATURE:
; NAME/KEY: unsure
; LOCATION: (1)..(749)
; OTHER INFORMATION: unsure at all Xaa locations
US-10-369-493-9308

Query Match 48.4%; Score 1963.5; DB 6; Length 749;
Best Local Similarity 55.0%; Pred. No. 3.1e-157;
Matches 412; Conservative 95; Mismatches 211; Indels 31; Gaps 11;

QY 9 QTLYDKVLOAHVDEKLDGTVLVLYIDRHLVHEVTSPOAFEGRLNAGRKVRPDCITLATTD 68
Db 4 KTLYGLWIDIEHVARDDGSSLYIDRHLVHEVTSPOAFEGRLNAGRKVRPDCITLATTD 63
QY 69 HNVPTTSRKALKDIAFIKEDDSRTQCVTLLENVKEFGVTYFGLSKRQGIHVHIGPEQ 128
Db 64 HNVPTTKAERQSGLLS-IADTVSRLLQVTLDCNDGFIPEFKMNDVRQGIHVHIGPEQ 122
QY 129 FTLPGTVVCGSHTSTHGAFGALAFIGTSEVHVLATQCLITKRSKNMIOVDGELAP 188
Db 123 ATLPGTVVCGSHTSTHGAFGALAFIGTSEVHVLATQCLITKRSKNMIOVDGELAP 182
QY 189 GVSSKDVWLHAIIGTAGTGAVIFBCGVSIRLSMEARMSICNMSIEGGRAGMVAVD 248
Db 183 GVTAKDIVLALIGKICTAGGNGYAVEFSGSTIRALSMEGRTICNMAIEAGARVMVAVD 242

QY 249 EITTEYLKGRPLAPKYDPSPEWHKATQYWKNLQSDPGAKYDIDVFDADKDIVPLTLWTGTS 308
Db 243 EKTQYVHGRFPABK--GSDWDAAVAFWRGLVSDPDADHFDVRVVELSAEIKFOVWTGTS 300
QY 309 EDVVPIITGVVDPDPTEATEAKKADGRRLMLQYMGLKAGTPMEDIPVDKVFISGCTNSRIED 368
Db 301 EMVSADVSDVPDERETDPVKESILIRALKYMGLOPNPDIPIKLDRVFISGCTNSRIED 360
QY 369 LRAAAAVVKGKAPNVKSMVPGSGVLVKTQABEGLDKIFEAGFEWREAGCSMCLGM 428
Db 361 LRAAAVVKGRKVASVTKQAMVPGSGVLVKAQAEVEGLDKIFEAGFEWREPGCSMCLAM 420
QY 429 NPDILAQERCASVSNRNFEGROGAGRTHLMSPVMAAAAGIVCKLADVRKL-TDYKASP 487
Db 421 NPDKLGSGEHCASVSNRNFEGROGAGRTHLMSPVMAAAAGIVCKLADVRKL-TDYKASP 480
QY 488 HIAAYQSTVTKPHVDERI-----NDAHEKDIADIPEDDNNGPHTNTSASVGTSG- 539
Db 481 SLXMLGNVLMKVYIQCFRLIVSILLAHXSVSKELPFSISAAAXNGSIAIYDRSVHRIFK 540
QY 540 -----LPKFTILKGAAPLEKANVDTDAIIPKQFLKTIKRTGLGNALFYEMRF-----N 558
Db 541 HWXSLMKPFTQHTGLVCPDRVNVDTQIIPKQFLKTIKRTGLGNALFYEMRF-----N 560
QY 589 EDGTEK---SDFVLNKEPYRKASILVCTGANFGCGSSREHAPWALNDFGIRSVIAPSPAD 645
Db 601 QDNKRPIINSDFVLPFRYRGASVLLARD-NFGCGSSREHAAWALDEYGFRTVIAPSPAD 659
QY 646 IFFNNSFKNGMLPIPKDOAQIEAIAEABARA--GKEIEVDLPNOLIKNATGTCTCTFEVE 703
Db 660 IFFNNSFKNGMLPI-VLNKVEVDALFAOCQVTEGTVLVDLAAQOVIPTDGTTY-AFQID 717
QY 704 EFRKHCLVNGLDDIGLTMQMEDKIAEPEA 732
Db 718 TFRKHCLVNGLDDIGLTMQMEDKIAEPEA 746
RESULT 12
US-10-369-493-8616
; Sequence 8616, Application US/10369493
; GENERAL INFORMATION:
; APPLICANT: Cao, Yongwei
; APPLICANT: Hinkle, Gregory J.
; APPLICANT: Slater, Steven C.
; APPLICANT: Goldman, Barry S.
; APPLICANT: Chen, Xianfeng
; TITLE OF INVENTION: EXPRESSION OF MICROBIAL PROTEINS IN PLANTS FOR PRODUCTION OF
; FILE REFERENCE: 38-10(52052)B
; CURRENT APPLICATION NUMBER: US/10/369,493
; PRIOR FILING DATE: 2003-02-28
; PRIOR APPLICATION NUMBER: US 60/360,039
; PRIOR FILING DATE: 2002-02-21
; NUMBER OF SEQ ID NOS: 47374
; SEQ ID NO 8616
; LENGTH: 681
; TYPE: PRT
; ORGANISM: Ralstonia metallidurans
US-10-369-493-8616
Query Match 48.2%; Score 1955.5; DB 6; Length 681;
Best Local Similarity 53.7%; Pred. No. 1.2e-156;
Matches 400; Conservative 96; Mismatches 174; Indels 75; Gaps 10;


```
Db 115 GATPGMTITVCGDSTHTSHGAFGAFGIGTSEVQVLSAQCLMKMKPRSMVREVGELA 174
QY 188 PGVSSKDVLTALIGITAGGTGAVIEFCGSVIRSLISMERNMSI CNMSIEGGARAGVAP 247
Db 175 AGVSAKQIALALIGRIGTAGTGYIEFAGSTIRGLSMGRMTVCMMAL EAGARAGVAV 234
QY 248 DETFEYIKGRPLAPKDSPEMHKATQYWKNIQSPGAKYDIDVFIDAKD IVPPTLTWGTG 307
Db 235 DETTLAVLHNPQAPQGEA--WESASAYWRTLRSDPAVFDAVVDIGVATIRPHVWTGTS 292
QY 308 PEDVPTTGVVDETFTEAKKADGRMLQYMGKAGTPEMDIPVDKVFISCTMSRIE 367
Db 293 PEMVVAIDERIPDRQEDPYRRRGRMERALTVMGLEPGIKVASIADKVFISCTNARLE 352
QY 368 DLRAAAVVKGRKAPNVKSAMVVPVGSGLVKTQAESEGLDKIFEAGFEFMRAGSCMCLG 427
Db 353 DLRAADVLRGRHVASNRQALVVPVSGIVKQABEGLDRI FIDAGFEFMRAGSCMCLG 412
QY 428 MNPDLAPQERCASTSNFEGROGAGGRTHLMSPVMAAAAGIVGKLADYRKLT DYKASP 487
Db 413 MNDRLAPGEBCASTSNFEGROGPGGRTHLVSPQMAAAAVAGHFVDV----- 462
QY 488 HIAVQKSTVTKPHVDERINDAHKDIADIPEDNNGPHNTTSASVGTSA GLPKFTIILK 547
Db 463 -----STVLQ-----SK-----SAVKATVILD 479
QY 548 GIAAPLEKANVDTALIPKQFLKTIKRTGLGNALFYMERNFEDG-----TEKSDPV 598
Db 480 GLVAPIRANVDTALIPKQFLKSIQRSGFGPYLPDEWRYLDPGEEGQDCSQSRPRPDPV 539
QY 599 LNKPYRKASILVCTGANFGCGSSREHAPMALNDFGIRSVIAPSPADIFPNNSFKXGMLP 658
Db 540 LNPGRYOGASVYL--VRENFQCGSSREHAPMALED FGLRALIAPSEADIFCNCKMGKGLLP 598
QY 659 IPIRQDQIEHIAE--ARAKEIEVDLPNOLIKNATGETTCTFEVEERKICLVNGLDD 716
Db 599 IVEANV--VDRLFEBVDTPGRLHVDLATQLVTPPSGDAI--SFSMDPKKHCIVNGLDD 656
QY 717 IGLTQMEDKIAFEAKMTRETPWL 741
Db 657 IGLALQHEBARIRYELNIRHPEWL 681

RESULT 13
US-10-369-493-7437
; Sequence 7437, Application US/10369493
; GENERAL INFORMATION:
; APPLICANT: Cao, Yongwei
; APPLICANT: Hinkle, Gregory J.
; APPLICANT: Slater, Steven C.
; APPLICANT: Goldman, Barry S.
; APPLICANT: Chen, Xianfeng
; TITLE OF INVENTION: EXPRESSION OF MICROBIAL PROTEINS IN PLANTS FOR PRODUCTION OF
; FILE REFERENCE: 38-10(52052)B
; CURRENT APPLICATION NUMBER: US/10/369,493
; PRIOR FILING DATE: 2003-02-28
; PRIOR FILING DATE: 2002-02-21
; NUMBER OF SEQ ID NOS: 47374
; SEQ ID NO 7437
; LENGTH: 740
; TYPE: PRT
; ORGANISM: Burkholderia cepacia
; FEATURE:
; NAME/KEY: unsure
; LOCATION: (1)..(740)
; OTHER INFORMATION: unsure at all Xaa locations
US-10-369-493-7437

Query Match 46.6%; Score 1891; DB 6; Length 740;
Best Local Similarity 52.5%; Pred. No. 4.2e-151;
```

```
Matches 396; Conservative 102; Mismatches 195; Indels 62; Gaps 13;
QY 34 DRHLVEVTSPOAFEGRLRNAGRKVR----RPDCTLATTDHNVPTTSKALKDIAFIXED 89
Db 1 ERRLVAVNTYQKHLSR--GRSCXAGWRIISANLALSDHNVPTDR-----SHGIADP 52
QY 90 DSRTOCVTLEENKVEFGVITYFGLSDKRQGIHVIGPQGFLLPCTTVVCGDSTHTSHGAF 149
Db 53 ISRLQVDTLSDNCDAVGTTFKMNIDLQGIVHIIGPEGATLPGMTITVCGDSTHTSHGAF 112
QY 150 GALAFGISTSEVHEVLTATQCLITRSKNMRIQVNDGELAPGVSSKDVLTALIGITAGGT 209
Db 113 GALAHGIGTSEVHEVLTATQLLQKSKRMVLKVEGALPRGCTLADIVLAIIGKITAGGT 172
QY 210 GAVIEFCGSVIRSLISMERNMSI CNMSIEGGARAGVAPDEITFEYIKGRPLAPKYDSEW 269
Db 173 GVAIEFGSTIRRLSLSMGRMTVCMMAL EAGARAGVAVDITTEYIKGRPSP--EGEWM 230
QY 270 HKATQYWKNIQSPGAKYDIDVFIDAKD IVPPTLTWGTSPEDVPTTGVVDPDEFATGAK 329
Db 231 NHAVEYWKQFSPDGAQFDRVVEINAAEIVQVYTWGTSPENVTAVDGRVPDPDEKDPVK 290
QY 330 KADGRMLQYMGKAGTPEMDIPVDKVFISCTMSRIEDLRAAAAYVK--GRKKAAPNKS 387
Db 291 RDLERALKYMALEPNAPISIKPDKIFIGSCTNARIEDIRAAAYVAKLGRRAVAPNRL 350
QY 388 AMVVPVSGGLVKTQAESEGLDKIFEAGFEFMRAGSCMCLGNPDLAPQERCASTSNNF 447
Db 351 AMVVPVSGGLVKAQEREGLDKVFITDAGFEWREPCSCMLANNARLEBGERCASTSNNF 410
QY 448 EGRQAGGRTHLMSPVMAAAAGIVGKLADYRKLT DYKASPHIAAYOKSTVTK----- 499
Db 411 EGRQAGGRTHLVSPMAAAAIIEGHFVDIRKLGXTMMKMM--NRTTLRLRPLGSLA 467
QY 500 -----PHYDERINQDAHEKDIIADIPEDNNGPHNTTSASVGTSA G- 539
Db 468 GLLLAGACNTVHGFGEDMSHLGNSISNHADKXAVDFCRPAQSGFYSLSRASPLETGA 527
QY 540 --LPKFTIILKGIAPLEKANVDTALIPKQFLKTIKRTGLGNALFYMERNF--NEDGTEK 594
Db 528 SWNEKFI VHTGVVAPLDRENVDTALIPKQFLKSIKRTGCGPNAFDEWRVYDHGEPGDN 587
QY 595 S-----DVLNKEPYRKASILVCTGANFGCGSSREHAPMALNDFGIRSVIAPSPADIFP 648
Db 588 SCRLNPDPFVLNQPRYOGASVYLAR--KNFGCGSSREHAPMALEQYGRAL IAPSPADIFY 646
QY 649 NNFCKXGMLPIPIKQDQAIATAIAEAAA--GKEIEVDLPNOLIKNATGETTCTFEVEEER 706
Db 647 NNCFKGVLPITVLEQ--QVHLENEYVAFNGFKLTVLEAQVRTAOGTEYPREVAAR 705
QY 707 KXCLVNGLDIDIGLTQMEDKIAFEAKMTRETPWL 741
Db 706 KYCLINGFDIDIGTLRHADKIROFEARIRAKQPWL 740

RESULT 14
US-10-369-493-4678
; Sequence 4678, Application US/10369493
; GENERAL INFORMATION:
; APPLICANT: Cao, Yongwei
; APPLICANT: Hinkle, Gregory J.
; APPLICANT: Slater, Steven C.
; APPLICANT: Goldman, Barry S.
; APPLICANT: Chen, Xianfeng
; TITLE OF INVENTION: EXPRESSION OF MICROBIAL PROTEINS IN PLANTS FOR PRODUCTION OF
; FILE REFERENCE: 38-10(52052)B
; CURRENT APPLICATION NUMBER: US/10/369,493
; PRIOR FILING DATE: 2003-02-28
; PRIOR APPLICATION NUMBER: US 60/360,039
; PRIOR FILING DATE: 2002-02-21
; NUMBER OF SEQ ID NOS: 47374
; SEQ ID NO 4678
```

```
; LENGTH: 729
; TYPE: PRT
; ORGANISM: Burkholderia fungorum
; FEATURE:
; NAME/KEY: unsure
; LOCATION: (1)..(729)
; OTHER INFORMATION: unsure at all Xaa locations
US-10-369-493-4678
```

```
Query Match 46.4%; Score 1881; DB 6; Length 729;
Best Local Similarity 52.5%; Pred. No. 2.9e-150;
Matches 396; Conservative 93; Mismatches 178; Indels 88; Gaps 13;
```

```
QY 46 APEGLNAGKRRPDPCTLTATDHNPTTSRKALKDIASFIKEDDSRTQCVTLEENVKEF 105
DB 4 AFEA-EAERPWRISANALSDHNVPPTDR-----SHCIADPISRLQVDTLDSNCDA 56
QY 106 GVTYFGLSDKROGIVHVIQPEOGFTLPGTTVCGDSHTSHGAFALAFGIGTSEVHVL 165
DB 57 GITQFMNDLRQGIHVIIGPEOGATLPGMTIVCGDSHTSHGAFALAHGIGTSEVHVL 116
QY 166 ATQCLITKSKNMRTOVDGELAPGVSSKDVHLHAIGICTAGGTGAVIEFCGVSIRLSM 225
DB 117 ATQTLQKSKNMLVKEGALPRGCTAKDIVLAIIGIKIGTAGGTGVAIEFGGSTRALS 176
QY 226 BARMISICNMSIEGGARAGVAPDEITFEYLKGRPLAPKYDSPWHKATQYWKNLQSDPGA 285
DB 177 EGRMTVCNMAIEAGARAGVAVDDTTIEYLKGRPFSP--EGVEHNHAYEWKQFKSDGGA 234
QY 286 KYDIDVIDAKDITPLTWTGTSPEVVPITGVVDPETFAATEAKKADGRMLQYMGKLAG 345
DB 235 QFDRVVELNAEIVPQVTWGTSPMTAVDGRVPDPREKDPVKRDALERALKYMALEPN 294
QY 346 TMEDIPVDKVFICSTNSRIEDLRAAAVVK--GRKKAENKSAVVPVCGSLVKTOABE 403
DB 295 APESIKPKIKIFIGSTNARIEDIRAAVYVVKLGRVAPNIRLAWVVPVCGSLVKAQER 354
QY 404 EGLDKIFEEAGFEWRAGCGMCLGNPDILAPOERCASSTNRNFEGRQAGGRTHLMSVP 463
DB 355 EGLDKVFTDAGFEWRPFGSCMLMADRLEPGERCASSTNRNFEGRQAGGRTHLVSPA 414
QY 464 MAAAAGIVGKLADVRKLTDYKASPH-----INQDAHEKDIIADIPEDNNGPHTNTSASVGT 496
DB 415 MAAAAAIEGHFVDIRKLGXTRMMKNMNRITLLRRFALGSLAGLLGLAGCNTVARIRRGH 474
QY 497 VTKPHVDER-----INQDAHEKDIIADIPEDNNGPHTNTSASVGT 537
DB 475 VAPRQPDQOOSXXISGFFLPAMRKAFFSRCAHR-----PGLETGASV--- 518
QY 538 AGLPKFTILKIAAPLEKANVDTDAIIPKQFLKTIKRTGLGNALFYEMRF---NEDGTEK 594
DB 519 --MEKIVHTGVVAPLDRENVDTDAIIPKQFLKTIKRTGFGPNADFWRVLDHCEPQDN 576
QY 595 S-----DFVLNKEPYPKASILVCTGANFCGSSREHAPWALNDFGIRSVIAPSFADIFF 648
DB 577 SQRLPNPDEVLPQRYOGASVLLAR--KNFCGSSREHAPWALEQYGFRLIAPSFADIFY 635
QY 649 NNSFKNGMLPIPKDOAQIEAIAAEARA--GKEIEVDLPNLIKNTGETICTFEVEEER 706
DB 636 NNCFKNGVLPVLTQEQ--QVDHLFNETYAFNGFKLITVDLEAQVVRTADGGTEYPEVAAR 694
QY 707 KCLVNLGLDDIGLTMQMEDKIAEFAEAKMTRETPWL 741
DB 695 KYCLLNGFDDIGLTLRHADKIRQFEAERIAKQPL 729
```

RESULT 15

```
US-10-369-493-7055
; Sequence 7055, Application US/10369493
```

GENERAL INFORMATION:

```
; APPLICANT: Cao, Yongwei
; APPLICANT: Hinkle, Gregory J.
; APPLICANT: Slater, Steven C.
```

```
; APPLICANT: Goldman, Barry S.
```

```
; APPLICANT: Chen, Xianfeng
```

```
; TITLE OF INVENTION: EXPRESSION OF MICROBIAL PROTEINS IN PLANTS FOR PRODUCTION OF
```

```
; TITLE OF INVENTION: PLANTS WITH IMPROVED PROPERTIES
```

```
; FILE REFERENCE: 38-10(52052)B
```

```
; CURRENT APPLICATION NUMBER: US/10/369,493
```

```
; CURRENT FILING DATE: 2003-02-28
```

```
; PRIOR APPLICATION NUMBER: US 60/360,039
```

```
; PRIOR FILING DATE: 2002-02-21
```

```
; NUMBER OF SEQ ID NOS: 47374
```

```
; SEQ ID NO 7055
```

```
; LENGTH: 686
```

```
; TYPE: PRT
```

```
; ORGANISM: Burkholderia cepacia
```

```
US-10-369-493-7055
```

```
Query Match 45.9%; Score 1861; DB 6; Length 686;
```

```
Best Local Similarity 51.5%; Pred. No. 1.3e-148;
```

```
Matches 387; Conservative 94; Mismatches 188; Indels 82; Gaps 11;
```

```
QY 6 STPTLYDKVLQAHVDEKLDGTVLLYIDRLHVHEVTSQAFEGRLNAGRKVRREDCTLA 65
DB 3 TSPRTLLDKLQSHVVAETPNPTLLYVDRHLVVEVTSQAFEAIRLSGRKWPETVLA 62
QY 66 TTDHNVPT-----TSRKALKDIAFSIKEDDSRTQCVTLEENVKRGVTFGLSDKRGIV 120
DB 63 VADHNVPITAAERTSMDAIDPL-----SRIOVAQLDKNCKEFGIKSYGIRNPOQGI 115
QY 121 HVIGPEOGFTLPGTTVCGDSHTSHGAFALAFGIGTSEVHVLATCLITKRSKNMRI 180
DB 116 HVVPELIGATLPGMTVAGDSHTSHGAFALAFGIGTSEVHVLATQCLSGVKKMSLV 175
QY 181 QVDGELAPGVSSKDVHLHAIGICTAGGTGAVIEFCGVSIRLSMEARMSICNMSIEGA 240
DB 176 NVEGVLPVGTAKDVILLAIIRRTGTAGGTGYAMEFAGSTIRTLSEGRMTLCNMAIEA 235
QY 241 RAGWVADEITFEYLKGRPLAPKYDSPWHKATQYWKNLQSDPGAKYDIDVIDAKDIVP 300
DB 236 RVGLIGVDDVTIDYVKGRRFPAPA--EAHWDAVAAYWRTLVSADARFQKIVNIDATQLR 293
QY 301 TLTWGTSPEDVVPITGVVDPDETFAATEAKKADGRMLQYMGKAGTPMEDIPVDKVFIS 360
DB 294 MVTWGTSPVMTVDDAVNPDLDDPDVRRATMAGALTYMGLEPGTSLKISLDKIFIS 353
QY 361 CTNSRIEDLRAAAAVKGRKAPNVKSAVVPVPGSLVKTQABEEGLDKIFEEAGFEWREA 420
DB 354 CTNARIEDLRAAAAVKGRHVAPTVQLALVPGSLVKAQAEAGLDAIFKEAGFEWREP 413
QY 421 GCSMCLGNPDILAPOERCASSTNRNFEGRQAGGRTHLMSPVMAAAAGIVGKLADVRKL 480
DB 414 GCSMCLGNPDILAPOERCASSTNRNFEGRQAGGRTHLMSPVMAAAAGIVGKLADVRKL 470
QY 481 TDYKASPHIAAYQKSTVTKPHVDERINQDAHEKDIIADIPEDNNGPHTNTSASVGT 540
DB 471 -----SP-----RRLVQP----- 479
QY 541 PKFTILKIAAPLEKANVDTDAIIPKQFLKTIKRTGLGNALFYEMRF---NEDGTEKS-- 595
DB 480 --FTKLEALVPLDRNVDTDAIIPKQFMKSVQRNGFGLNFDENRYFDHGEFGQDPSTR 537
QY 596 ----DFVLNKEPYPKASILVCTGANFCGSSREHAPWALNDFGIRSVIAPSFADIFFNNS 651
DB 538 RLNPDFVLNQPFRFAGAEILL--TRDNFCGSSREHAAWALWDFGIRALIAPGFADIFYNC 596
QY 652 FKNGMLPIPKDOAQIEAIAAEARA--GKEIEVDLPNLIKNTGETICTFEVEEERPKHCL 710
DB 597 FKNGMLPIKLDERIVQQLFDVLVGRTPGLURLAIDLQAQRIQPPAGDAI--PFDVEPERKRL 655
QY 711 VNGLDDIGLTMQMEDKIAEFAEAKMTRETPWL 741
DB 656 LNGLDDVALTILQTTDQIRAYERNRRAHEPWL 686
```

RESULT 16
US-10-369-493-4299
Sequence 4299, Application US/10369493
GENERAL INFORMATION:
APPLICANT: Cao, Yongwei
APPLICANT: Hinkle, Gregory J.
APPLICANT: Slater, Steven C.
APPLICANT: Goldman, Barry S.
APPLICANT: Chen, Xianfeng
TITLE OF INVENTION: EXPRESSION OF MICROBIAL PROTEINS IN PLANTS FOR PRODUCTION OF
FILE REFERENCE: 38-10(52052)B
CURRENT APPLICATION NUMBER: US/10/369,493
PRIORITY FILING DATE: 2003-02-28
PRIORITY FILING DATE: 2002-02-21
NUMBER OF SEQ ID NOS: 47374
SEQ ID NO 4299
LENGTH: 688
TYPE: PRT
ORGANISM: Burkholderia fungorum
US-10-369-493-4299

Query Match 45.8%; Score 1857; DB 6; Length 688;
Best Local Similarity 51.3%; Pred. No. 2.8e-148;

Matches 386; Conservative 92; Mismatches 189; Indels 86; Gaps 10;

6 STPQILYDKVLQAHVDEKLDGTVLYIDRLVHEVTSPOAFEGIRNAGKRVRRPDCITLA 65
5 TSPRLTLDKLMQSHVAETPNGLLYVDRLVLEVTSPOAFEAIRLSGRKPMPEYTLA 64
66 TTDHNPPT-----TSRKALDIASFIEDSRTOCVTLEENVKEFGVYFGSDRKQGITV 120
65 VADHNPPTTAAERTSMDALADPL-----SRIQVQLDKKCKEFGIKSYGIRNPQCGII 117
121 HVIGPQGFLLPGTTCVCGDSHTSGAFALAFGISTEVEHVLATQCLITKRSKNMRI 180
118 HVYGPRLGNTLPMTVAVAGSHSTHGAFAALAFGVISTEVEHVLATQCLISVGRKSMVLV 177
181 QVDELAPGVSSKDVVLAHIGITAGTGAVIEFGCSVIRSLSEAMRSICNMSIEGGA 240
178 NVEGVLPVGTATADKVLAIIRRTGTAGTGAVMEFAGSTIRTLISMEGRMTLCNNAIEGGA 237
241 RAGMVAPEDETEEYLLGRPLAPKYDSPEMHKATQYWKLOSDPAKVDIVFDIAKDIVP 300
238 RGLGVADVDTTIDYVGRPAFA--EAHMDAAVAVWRTLVSDADARPKIVNIDATQLRP 295
301 TLTWGTSPEDEVVPIITGVDPDEFATEAKKADGRRLQYWGILKAGTPMEDIPVDKVFIS 360
296 WVTWGTSPEMVVTVDAAVNPRLDDPVRATYAGALTWGLEFGTSLKSTISLDKITFIS 355
361 CINSRIEDLRAAAVVKGRKADPNVKSAMVPGSLVKTQAEEDGLDKIFEAGFEWREA 420
356 CINAIEDLRAAAAIYKGVHVAFTVQALVPPSGGLYKQAEAEGLDAIFKEAGFEWREP 415
421 GCSMCGMNPDLIAPORCASTSNRNFEGROGAGRTHLSPVMAAAGIVGLADVRKL 480
416 GCSMCLGMNDRLRPERCASTSNRNFEGROGAGRTHLSPVMAAAGIVGLADVRKL 472
481 TDYKASPHIAAYOKSTVTKRPHVDERINODAEKDIADIPEDNNGPHTNTSASVGTSGAL 540
473 -----SHGGL 477
541 --PKFTILKGIAPLEKANVDTDAIIPKQFLTKITKTGLGNALFYEMRF--NEDGTESK 595
478 LVOPFTKLEALVPLDRVAVDTDAIIPKQFMKSVQRNGFQINIFDEKRYFDHGGPQDPS 537
596 -----DEVLNKEPYRKASILVCTGANFGGSSREHAPMALNDPGIRSVIAPSRADIFEN 649
538 TRRLNPDVFLNCPFRAGAILL--TRDNFGCGSSREHAPMALNDPGIRALTAIPGRADIFYG 596
650 NSFQKGMLEPIPKDAQIQAIAAEARA--GKEIEVDLPNOLIKNATGETTCTFEVEERKH 708

Db 597 NCFKNGMLPIKLDERIVQQLFDLVGRTPGRLAIDLEAQRIOFPAGDAI--PFVDEPERKH 655
QY 709 CLVNGLDIDGLTMQMEDKIAEFAKXTRETPEWL 741
Db 656 RLINGLDVALLTQOTQIRAYERNRRRAHEPWL 688

RESULT 17
US-10-369-493-9059
Sequence 9059, Application US/10369493
GENERAL INFORMATION:
APPLICANT: Cao, Yongwei
APPLICANT: Hinkle, Gregory J.
APPLICANT: Slater, Steven C.
APPLICANT: Goldman, Barry S.
APPLICANT: Chen, Xianfeng
TITLE OF INVENTION: EXPRESSION OF MICROBIAL PROTEINS IN PLANTS FOR PRODUCTION OF
FILE REFERENCE: 38-10(52052)B
CURRENT APPLICATION NUMBER: US/10/369,493
PRIORITY FILING DATE: 2003-02-28
PRIORITY FILING DATE: 2002-02-21
NUMBER OF SEQ ID NOS: 47374
SEQ ID NO 9059
LENGTH: 672
TYPE: PRT
ORGANISM: Chloroflexus aurantiacus
US-10-369-493-9059

Query Match 42.2%; Score 1711.5; DB 6; Length 672;
Best Local Similarity 49.2%; Pred. No. 5.7e-136;

Matches 358; Conservative 97; Mismatches 210; Indels 63; Gaps 12;

8 PQTLYDKVLQAHV--DEKLDGTVLYIDRLVHEVTSPOAFEGIRNAGKRVRRPDCITLAT 66
1 PRTLEKEWEALVBPETAETPAVLVIDHLIHEVTSPOAFETELRORGRVRRPDCITLAT 60
67 TDHNPPTTSRKALKDIAEFKEDSRTOCVTLEENVKEFGVYFGSDRKQGITVHVIGPE 126
61 MDHSTPTTPRNHLGIIP--VVDPMALISQLEQLRKCAEFGICPLFELGIDENOGIVHVIQPE 118
127 QGFTLPGTTVVCDSHTSGAFALAFGISTEVEHVLATQCLITKRSKNMRIQVDEL 186
119 QGLTQPGMTIIVCGDSHTSGAFALAFGISTEVEHVLATQCLIRKPKTCVAVRIDRL 178
187 APGVSSKDVVLAHIGITAGTGAVIEFGCSVIRSLSEAMRSICNMSIEGARGMVA 246
179 GPGVTAKDIIIALIAKYGVGGGTGVFEYMEGAIRALSMEEMTICNMSIEGARGMVA 238
247 PDELTFEYLLGRPLAPKYDSPEMHKATQYWKLOSDPGAKYDIDVFDIAKDIVPTLTWGT 306
239 PDDTTFEYIAGRPFAPK--GADFEAAVARKRTLPSDEGATFHEHLTSLSELKPMITTYGT 296
307 SPEDEVVPIITGVDPDEFATEAKKADGRRLQYWGILKAGTPMEDIPVDKVFISCTNSRI 366
297 NPGMGIPIDAEVPRDEMDPARSRALDKALAYMGLBEGKPLIGHPVADVVFISCTNSRI 356
367 EDLRAAAVVKGRKADPNVKSAMVPGSLVKTQAEEDGLDKIFEAGSEMEAGCSML 426
357 SDLRQAAOFFRGRKVAPEVR--VMVVPSQOYKRAAEARGLDIFEAGSEMEAGCSACL 415
427 GMPNDIILAPORCASTSNRNFEGROGAGRTHLSPVMAAAGIVGLADVRKLTDYKAS 486
416 GMPNDKVPKGYAVASTSNRNFEGROGAGRTHLSPVMAAAGIVGLADVRKLTDYKAS 466
487 PHIAAYOKSTVTKRPHVDERINODAEKDIADIPEDNNGPHTNTSASVGTSGALPKFTTL 546
467 AHVLELEALV-----EPVSTIG----- 485
QY 547 KGIAPLEKANVDTDAIIPKQFLTKITKTGLGNALFYEMRFNEDGTESDPFLNKEPYRK 606
Db 486 KAVVLPVE--NIDIDQIIPAFVLKVTDRSGLAAGLFEAMRIQADGTIPNDPFLNPEAAG 543

Db 294 GVRDEKLP-----EKHNDERAPSYMGLSPQSTYTDIPVGHVFGSCTNSRLSDLE 346
Qy 371 AAAAVVGRKKAPNVKSAWVVPQSGLVKTOAEEBGLDKIFEEAGFEWREAGCSMCLGNP 430
Db 347 IAAVSVGKKVKEGVR-ALVVPQSORVREAAHMKGLHRIFFEEAGFEWREPCSCMCLGNP 405
Qy 431 DIAPQERCASTNSRNFEGRGAGGRTHLMSPVMAAAAGIVGLADVRLTDYKASPHIA 490
Db 406 DQVEGEGHCASTNSRNFEGRGAGGRTHLVSPAMAAALYGHFEDIRK-----454
Qy 491 AYQKSTYTKPHVDERINODAEKDIADIPEDNNGPHNTSASVTSAGLRFKFTILKIA 550
Db 455 -----ESYDG-----AFRIHKATA 468
Qy 551 APLEKANVDTDAIIPKQFLKTIKRTGLGNALFYEMRFNEDGTEKSDFVLNKEPYRKASIL 610
Db 469 AVLMDNDIDTDQIIPKQYLKRIERTGFGKFLFDEKRYNNRQENPNFPLNOKERKASIL 528
Qy 611 VCTGANFGCGSSREHAPWALNDFGIRSVIAPSPADIFENNSFKNGMLPIPIKQAOIBAI 670
Db 529 I-TGDNFGCGSSREHAPWALADYGFRLVIAGGFADIFYNNCKNGMLPI-VMDKDMREQL 586
Qy 671 AAERAKKEIEVDLPNOLIKNATGETICTFEVEEPRKCLVNGLDLIGLTMQEMKIAEF 730
Db 587 -AKTDAREQITVDLENEIMTNTNR--FHFTIEKMKKEKLNGLDEISITQYEOEIKEX 643
Qy 731 EAK 733
Db 644 ERK 646

RESULT 20

US-10-369-493-14041

; Sequence 14041, Application US/10369493
; GENERAL INFORMATION:
; APPLICANT: Cao, Yongwei
; APPLICANT: Hinkle, Gregory J.
; APPLICANT: Slater, Steven C.
; APPLICANT: Goldman, Barry S.
; APPLICANT: Chen, Xianfeng
; TITLE OF INVENTION: EXPRESSION OF MICROBIAL PROTEINS IN PLANTS FOR PRODUCTION OF
; FILE REFERENCE: 38-10(52052)B
; CURRENT APPLICATION NUMBER: US/10/369,493
; PRIOR FILING DATE: 2003-02-28
; PRIOR APPLICATION NUMBER: US 60/360,039
; NUMBER OF SEQ ID NOS: 47374
; SEQ ID NO 14041
; LENGTH: 679
; TYPE: PRT
; ORGANISM: Pseudomonas fluorescens
; FEATURE:
; NAME/KEY: unsure
; LOCATION: (1)...(679)
; OTHER INFORMATION: unsure at all Xaa locations
US-10-369-493-14041

Query Match 41.2%; Score 1670.5; DB 6; Length 679;
Best Local Similarity 47.3%; Pred. No. 1.7e-132;
Matches 355; Conservative 108; Mismatches 209; Indels 79; Gaps 15;

Qy 9 QTVLDKVLQAHV--DEKLDGTVLLYIDRLVHEVTSPOAFEGIRNAGRKVRREDCTLA 65
Db 1 RTLQXKHDSHTVCTLDQ--GHVLLYIDROVANEYTSPOAFSGLRGRTVWRPAATLA 58
Qy 66 TTDHNVPTSRKALKDIAFSIKEDSRQCCTLLENKVEFGTVYGLSDKROGIYHVGIP 125
Db 59 VVDHNVPT---APKRIATMPAGAR-QVSYFEENCRDFGIELDVLVDKRGIEHVAIP 113
Qy 126 EOGFTLPQTIVVCGDSHTSYHGAFALAFGIGTSEVENHVLATQCLITKRSKMRIOVDGE 185
Db 126 EOGFTLPQTIVVCGDSHTSYHGAFALAFGIGTSEVENHVLATQCLITKRSKMRIOVDGE 185

Db 114 EOGFTLPQMVVAAAGDSHTTYYGALGAFGFGIGTSEIEHLATQTLVYKRLTRVTNGE 173
Qy 186 LAPVSSKDVVLHAIGIITAGTGAVIEFGCVIRLSMEARNSICMSTEGGARAGMV 245
Db 174 LGAGVTSKDIIMALIERIKASGATGVAIEFTGPAISALSYEARMTICMAVEAGARGAFM 233
Qy 246 APDEITEYILKGRPLARKYDSEPBWHKATQYKNTLQSDPGAYDIDVFIADADYPTLTWG 305
Db 234 APDDKVAIVLQHKRRAP--GKLMEQALDHMKTLHSDGAVFDEEVLIDVALEPMVTWG 291
Qy 306 TSPEDVVPITGVDPDETFATEAKKADGRMLQYMGKAGTPMEDIPVDKFISSCTNSR 365
Db 292 TSPQAPRIKAVDPDPAQPPILRQGLQRALDYMGLTPGNPLNEVITSHAFISGCTNAR 351
Qy 366 IEDRRAAAVVKGRKAPNVKSAWVVPQSGLVKTOAEEBGLDKIFEEAGFEWREAGCSMC 425
Db 352 IEDRDAVARVVKGRVAHV-AMIVPGSTLVNRQADEGLAQFLDAGFEMRQSGCSMC 410
Qy 426 LGANPDIIAPQERCASTNSRNFEGRGAGGRTHLMSPVMAAAAGIVGLADVRLTDYKA 485
Db 411 LAMDDVILAPDRCASTNSRNFEGRGAGGRTHLMSPVMAAA-ISGHLTVRTV-----464
Qy 486 SPHIAAYQKSTVTKPHVDERINQDAHEKDIADIPEDNNGPHNTSASVTSAGLPRFTI 545
Db 465 -----ALEAXT-----MQPDT 476
Qy 546 LKGIAAPLEKANVDTDAIIPKQFLKTIKRTGLGNALFYEMRFNEDGTEKSDFVLNKEBYR 605
Db 477 VSGSAAPFLANIDTDVIMPQFLKGTIDRGLDRGLFEDLFLASGEBNPFVNLQPMQ 536
Qy 606 KASILVCTGANFGCGSSREHAPWALNDFGIRSVIAPSPADIFENNSFKNGMLPIPIKQ 665
Db 537 DAFLIV-TGPNFGCGSSREHAWGKQVIRALIGTFAGIFYNNCQNGVLAQL-DA 594
Qy 666 QI----EALAAERAKKEIEVDLPNOLIKNATGETICTFEVEEPRKCLVNGLDLIGLTM 721
Db 595 QPKRYAEAISVPATA--RISVNLAQOTIELADG-TLIEFEIDQLRKQSLGLGLDAIGTTL 651
Qy 722 QMEDKIAEFKAKMTRETEPWLDTGYLKRKQ 752
Db 652 QRTGDIRAFEARHLADNPWL---GWMQNGR 679

RESULT 21

US-10-369-493-8819

; Sequence 8819, Application US/10369493
; GENERAL INFORMATION:
; APPLICANT: Cao, Yongwei
; APPLICANT: Hinkle, Gregory J.
; APPLICANT: Slater, Steven C.
; APPLICANT: Goldman, Barry S.
; APPLICANT: Chen, Xianfeng
; TITLE OF INVENTION: EXPRESSION OF MICROBIAL PROTEINS IN PLANTS FOR PRODUCTION OF
; FILE REFERENCE: 38-10(52052)B
; CURRENT APPLICATION NUMBER: US/10/369,493
; PRIOR FILING DATE: 2003-02-28
; PRIOR APPLICATION NUMBER: US 60/360,039
; PRIOR FILING DATE: 2002-02-21
; NUMBER OF SEQ ID NOS: 47374
; SEQ ID NO 8819
; LENGTH: 668
; TYPE: PRT
; ORGANISM: Ralstonia metallidurans
US-10-369-493-8819

Query Match 39.3%; Score 1595.5; DB 6; Length 668;
Best Local Similarity 44.8%; Pred. No. 3.8e-126;
Matches 330; Conservative 109; Mismatches 225; Indels 73; Gaps 10;

Qy 9 QTVLDKVLQAHVDEKLDGTVLLYIDRLVHEVTSPOAFEGIRNAGRKVRREDCTLATTD 68
Db 1 RTLQXKHDSHTVLLDADNVLLVADLHIMNEYTSPOAFAGIAGGRVAAAGONLAVVD 60


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/ PRIOR APPLICATION NUMBER: 60/267,636
/ PRIOR FILING DATE: 2001-02-09
/ PRIOR APPLICATION NUMBER: 60/269,308
/ PRIOR FILING DATE: 2001-02-16
/ Remaining Prior Application data removed - See File Wrapper or PALM.
/ NUMBER OF SEQ ID NOS: 78614
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 51178
/ LENGTH: 477
/ TYPE: PR1
/ ORGANISM: Bordetella pertussis
US-10-282-122A-51178

Query Match      38.5%; Score 1560; DB 6; Length 477;
Best Local Similarity 64.5%; Pred. No. 2,2e-123;
Matches 305; Conservative 56; Mismatches 104; Indels 8; Gaps 2;

QY 6 STPQTLYDKVLQAHVYDEKLDGTVLLYIDRHLVHEVTSPOAFEGELRNAGKVRPDCITLA 65
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 10 SMOQTLYDKLMDAHVHQSDEGTCMLYIDRHLVHEVTSPOAFEGELRNAGKVRPDCITLA 69
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 66 TTDNNVPTTSRKALKDIAFIEDDSRTQCVTLEENKVEFGVTEGSLSDKROGIHVITGP 125
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 70 VADNNVPTLNK-----AQGIEDPISRLQVDTLDDNCAKYGITEFRMDLRQGIHVITGP 123
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 126 EQGFTLPQTVVCGDSHSTHGAFGALAFGIGTSEVEHVALTOCLITRSKNMRIQVDGE 185
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 124 EQGFTLPQTVVCGDSHSTHGAFGALAFGIGTSEVEHVALTOCLITRSKNMRIQVDGE 183
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 186 LAPGVSSKDVLAHAIIGTNGTGAVIEFGSVIRSLSMERNSICMNSIEGARGANV 245
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 184 LPFECTAKDVLAHIIIGTNGTGAVIEFGSVIRSLSMERNSICMNSIEGARGANV 243
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 246 APDEITFEYLKGRPLAPKYDSPBWHKATQYWKNLQSDPGAKYDIDVFIDAKDIPTLTWG 305
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 244 AVDDKTIDYFGRPAAPY--GVLDQAQVYWRTLHSDAGARDVYINVDARDIKPQVTWG 301
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 306 TSPEDVVPITGVPPPEFPAEAKKADGRMLQYWGAKGTPEMDIPVDKYFISGCTNSR 365
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 302 TSPENVLPVDRVDPDEKXDVRSRGMERALEYGLKPNPLVDIRDRVFIISGCTNSR 361
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 366 IEDLRAAAAYVKKRKAQNVKSAWVPPSGGLVKTQAEELGDKLFEAGFEWREAGCSMC 425
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 362 IEDLRAAAAYVKKRKAQNVKSAWVPPSGGLVKTQAEELGDKLFEAGFEWREAGCSMC 421
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 426 LGMNPDLIAPERCASSTNRNFEQGAGGRTHLMSPTMAAAGVGLADVR 478
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 422 LAMNADRLAPERCASSTNRNFEQGAGGRTHLVSPMAAAGVGLADVR 474
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:

RESULT 24
/ US-10-282-122A-65286
/ Sequence 65286, Application US/10282122A
/ GENERAL INFORMATION:
/ APPLICANT: Wang, Liangsu
/ APPLICANT: Zamudio, Carlos
/ APPLICANT: Malone, Cheryl
/ APPLICANT: Haselbeck, Robert
/ APPLICANT: Ohlsen, Kari
/ APPLICANT: Zyskind, Judith
/ APPLICANT: Wall, Daniel
/ APPLICANT: Trawick, John
/ APPLICANT: Carr, Grant
/ APPLICANT: Yamamoto, Robert
/ APPLICANT: Forsyth, R.
/ APPLICANT: Xu, H.
/ TITLE OF INVENTION: Identification of Essential Genes in Microorganisms
/ FILE REFERENCE: ELITRA.034A
/ CURRENT APPLICATION NUMBER: US/10/282,122A
/ PRIOR FILING DATE: 2003-02-20
/ PRIOR APPLICATION NUMBER: 60/191,078
/ PRIOR FILING DATE: 2000-03-21
/ PRIOR APPLICATION NUMBER: 60/206,848
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/ PRIOR FILING DATE: 2000-05-23
/ PRIOR APPLICATION NUMBER: 60/207,727
/ PRIOR FILING DATE: 2000-05-26
/ PRIOR APPLICATION NUMBER: 60/230,335
/ PRIOR FILING DATE: 2000-09-06
/ PRIOR APPLICATION NUMBER: 60/230,347
/ PRIOR FILING DATE: 2000-09-09
/ PRIOR APPLICATION NUMBER: 60/242,578
/ PRIOR FILING DATE: 2000-10-23
/ PRIOR APPLICATION NUMBER: 60/253,625
/ PRIOR FILING DATE: 2000-11-27
/ PRIOR APPLICATION NUMBER: 60/257,931
/ PRIOR FILING DATE: 2000-12-22
/ PRIOR APPLICATION NUMBER: 60/267,636
/ PRIOR FILING DATE: 2001-02-09
/ PRIOR APPLICATION NUMBER: 60/269,308
/ Remaining Prior Application data removed - See File Wrapper or PALM.
/ NUMBER OF SEQ ID NOS: 78614
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 65286
/ LENGTH: 469
/ TYPE: PR1
/ ORGANISM: Neisseria gonorrhoeae
US-10-282-122A-65286

Query Match      38.4%; Score 1558.5; DB 6; Length 469;
Best Local Similarity 64.0%; Pred. No. 2.8e-123;
Matches 304; Conservative 60; Mismatches 102; Indels 9; Gaps 3;

QY 7 TPQTLYDKVLQAHVYDEKLDGTVLLYIDRHLVHEVTSPOAFEGELRNAGKVRPDCITLA 66
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 2 TAQTLYDKLMSHVHREBGGTVLLYIDRHLVHEVTSPOAFEGELRNAGKVRPDCITLA 61
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 67 TDHNVPTTSRKALKDIAFIEDDSRTQCVTLEENKVEFG--VTFYFGSLDKROGIHVITGP 125
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 62 ADHNTPL-----GWDKGIQDPISKQVDTLDDNCAKYGITEFRMDLRQGIHVITGP 115
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 126 EQGFTLPQTVVCGDSHSTHGAFGALAFGIGTSEVEHVALTOCLITRSKNMRIQVDGE 185
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 116 EQGFTLPQTVVCGDSHSTHGAFGALAFGIGTSEVEHVALTOCLITRSKNMRIQVDGE 175
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 186 LAPGVSSKDVLAHAIIGTNGTGAVIEFGSVIRSLSMERNSICMNSIEGARGANV 245
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 176 LKAGVYAKDVLAHIIIGTNGTGAVIEFGSVIRSLSMERNSICMNSIEGARGANV 235
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 246 APDEITFEYLKGRPLAPKYDSPBWHKATQYWKNLQSDPGAKYDIDVFIDAKDIPTLTWG 305
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 236 AVDDKTIDYFGRPAAPY--GVLDQAQVYWRTLHSDAGARDVYINVDARDIKPQVTWG 293
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 306 TSPEDVVPITGVPPPEFPAEAKKADGRMLQYWGAKGTPEMDIPVDKYFISGCTNSR 365
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 294 TSPENVLPVDRVDPDEKXDVRSRGMERALEYGLKPNPLVDIRDRVFIISGCTNSR 353
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 366 IEDLRAAAAYVKKRKAQNVKSAWVPPSGGLVKTQAEELGDKLFEAGFEWREAGCSMC 425
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 354 IEDLRAAAAYVKKRKAQNVKSAWVPPSGGLVKTQAEELGDKLFEAGFEWREAGCSMC 413
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
QY 426 LGMNPDLIAPERCASSTNRNFEQGAGGRTHLMSPTMAAAGVGLADVR 480
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:
DB 414 LAMNADRLAPERCASSTNRNFEQGAGGRTHLVSPMAAAGVGLADVR 468
    |||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:||||:

RESULT 25
/ US-10-282-122A-65917
/ Sequence 65917, Application US/10282122A
/ GENERAL INFORMATION:
/ APPLICANT: Wang, Liangsu
/ APPLICANT: Zamudio, Carlos
/ APPLICANT: Malone, Cheryl
/ APPLICANT: Haselbeck, Robert
/ APPLICANT: Ohlsen, Kari
/ APPLICANT: Zyskind, Judith
```

Db 414 LAMNADRLTPGQRCASSTNRNFEGRQNGRTHLVSPAMAAAAAVTGRFTDIRMM 468

Search completed: March 17, 2003, 08:54:43
Job time : 49 secs

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; APPLICANT: Wall, Daniel
; APPLICANT: Trawick, John
; APPLICANT: Carr, Grant
; APPLICANT: Yamamoto, Robert
; APPLICANT: Forsyth, R.
; APPLICANT: Xu, H.
; TITLE OF INVENTION: Identification of Essential Genes in Microorganisms
; FILE REFERENCE: ELITRA.034A
; CURRENT APPLICATION NUMBER: US/10/282,122A
; CURRENT FILING DATE: 2003-02-20
; PRIOR FILING DATE: 2000-03-21
; PRIOR APPLICATION NUMBER: 60/191,078
; PRIOR APPLICATION NUMBER: 60/206,848
; PRIOR FILING DATE: 2000-05-23
; PRIOR APPLICATION NUMBER: 60/207,727
; PRIOR FILING DATE: 2000-05-26
; PRIOR APPLICATION NUMBER: 60/230,335
; PRIOR FILING DATE: 2000-09-06
; PRIOR APPLICATION NUMBER: 60/230,347
; PRIOR FILING DATE: 2000-09-09
; PRIOR APPLICATION NUMBER: 60/242,578
; PRIOR FILING DATE: 2000-10-23
; PRIOR APPLICATION NUMBER: 60/253,625
; PRIOR FILING DATE: 2000-11-27
; PRIOR APPLICATION NUMBER: 60/257,931
; PRIOR FILING DATE: 2000-12-22
; PRIOR APPLICATION NUMBER: 60/267,636
; PRIOR FILING DATE: 2001-02-09
; PRIOR APPLICATION NUMBER: 60/269,308
; PRIOR FILING DATE: 2001-02-16
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 78614
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 65917
; LENGTH: 469
; TYPE: PRT
; ORGANISM: Neisseria meningitidis
US-10-282-122A-65917
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Query Match      38.1%; Score 1545.5; DB 6; Length 469;
Best Local Similarity 63.4%; Pred. No 3 6e-122;
Matches 301; Conservative 62; Mismatches 103; Indels 9; Gaps 3;

QY 7 TPQTLYDKVLQAHVDEKLDGTGTVLLYIDRHLVHEVTSQPAFEGRLNAGRKVRPDCTLAT 66
Db 2 TAQTLYDKLWNSHVRREEDGTVLLYIDRHLVHEVTSQPAFEGRLKMAGRKLWRIDSVVST 61

QY 67 TDHNVETTSRKALKDITASFIKEDDSRTQCVTLLENVKEFG-VTYFGLSDKREQIVHVIGP 125
Db 62 ADHNTPT-----GDWDKGIQDPISKLVQVDTLDKNIKEFGALAYFPFMDKGGQIVHVMP 115

QY 126 EOGFTLPQTVVCGDSHTSTHGAFALAFAGIGTSEVHVLATOCILTKRSKNMRIQVDGE 185
Db 116 EQGATLPQTVVCGDSHTSTHGAFALAHGIGTSEVHTWATQCIITAKSKSMLIAVDGK 175

QY 186 LAPGVSSKDVVLHAIGIIGTAGTGAVIEFCGVSIRLSMEARMSICNMSIEGGARAGMV 245
Db 176 LKAGVTAKDVALYIIQIGTAGTGAVIEFGGEAIRLSMEGRMTCNMAIEAGARSGMV 235

QY 246 APDEITFEYLKGRPLAPKYDSPWHKATQYWKNLQSDPGAKYDIDVIDAKDIVPTLTWG 305
Db 236 AVDQTTIDYVKDKPFAPGEA--WDKAVEYWRTLVSDGAVFDKEYRFNAEDIEPQVTWG 293

QY 306 TSPEDVVPITGVVPDPETFAATEAKADGRMLQVMGLKAGTPMEDIPVDKVFIGSCTNSR 365
Db 294 TSPFEMVLDISSKVPNPAEETDPVKRSGMERALEYMGLEAGTFLNEIPVDIVFIGSCTNSR 353

QY 366 IEDLRAAAAVVGRKKAPNVKSAWVPGSLVKYQAEELGDKIFEEAGFEWREAGSCMC 425
Db 354 VEDLREAAAIADKRKAANQVRVLIVPGSLVKEQAEKEGLDKIFIEAGFEWREPGSCMC 413

QY 426 LGNNPDLAPQRCASSTNRNFEGRQNGRTHLVSPMAAAAGIVGKLADVRKL 480
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